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January 1926

The Official Magazine of the Catholic Hospital Association of the U.S. and Canada.

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411 Garland Building

Hospital Progress

Official Magazine of the
CATHOLIC HOSPITAL ASSOCIATION
of the United States and Canada

Volume VII
1926

Published for the Association
THE BRUCE PUBLISHING COMPANY
Milwaukee, Wisconsin

21549

Hospital Progress

Vol. VII JANUARY, 1926 No. 1

The Catholic Hospital Association During 1925

Edward F. Garesché, S. J.

LAST year, the Holy Year of Jubilee, with its hallowed memories of the past, has seen some historic beginnings in the Catholic Hospital Association, and has witnessed besides some notable developments in existing activities. Looking back over the year just passed, one sees many reasons for fervent gratitude and many motives for bright anticipation during the opening year of 1926.

The two great works undertaken by the Association last year, The College of Hospital Administration and the International Catholic Guild of Nurses, have both taken notable strides forward during the year just passed.

The College of Hospital Administration has developed its courses and formulated its ideals and is well under way in the second year of its existence. At the recent meeting of the American Hospital Association a special committee was appointed to study the situation and this committee approved the program of the College as a model curriculum and recommended to hospital workers everywhere the new institution, the first of its kind in the world.

The past year also witnessed the first annual convention of the International Catholic Guild of Nurses at Spring Bank, Wis. The general subject of the Conference, "Nursing Opportunities," proved extremely interesting and practical, and the splendid papers of discussion, reported in HOSPITAL PROGRESS, will form a permanent source of material on this important subject. During the year the Guild has grown until it numbers 233 cities in 36 states of the United States, and 8 cities in 5 provinces in Canada, besides its European membership. The local organization of groups of members of the International Guild, to act as local Guilds has also begun, and successful meetings were held in Chicago, Gary, Ind., etc., for this purpose.

The Tenth Annual Conference of the Catholic Hospital Association at Spring Bank was very successful, and the inspirational program, whose keynote was The Eminent Hospital, proved very interesting and practical to the many Sisters who attended from hospitals all over the United States and Canada. This Conference celebrated the tenth anniversary of the birth of the Hospital Association, and also the fifth anniversary of the establishment of HOSPITAL PROGRESS, its official organ.

Anyone who looks at the numbers of HOSPITAL PROGRESS issued today and compares them with the issues even of last year will be able to find a visible proof of the growth of the magazine. The December issue of Hospital Progress carried 80 pages of advertising and 48 pages of text—both the one and the other helpful and interesting to all hospital workers. The circulation of the magazine is growing constantly, and it is hoped that more and more efforts will be made by everyone interested in the Association, until it reaches and serves all the large circles not only of Sisters, but also of doctors and nurses and other hospital workers, whom it is intended to help.

The number of committees of the Catholic Hospital Association and the excellent work they are doing in studying hospital problems and conditions, also took new increase during 1925. There is a continual growth in the interest of Mother Superiors of hospitals and members of the personnel in these committees, and this is shown by the proportion of answers given to the questionnaires. Over fifty per cent of all the questionnaires sent out have been answered this year and a large proportion of hospitals have now answered or reported on all the questionnaires, while the extraordinary groups of statistics thus obtained mark a decided advance in hospital study.

The sodalities for nurses have also increased in number in the last year and are endeavoring to carry out, even in the midst of difficulties inseparable from hospital life, the program of the Association for sodalities.

The work of raising scholarships through the International Guild of Nurses for the encouragement of special studies of graduate nurses has also been commenced and promises great results. The Superiors of Hospital Sisterhoods are making greater and greater efforts to give their Sisters better educational opportunities and to prepare for the growing demands in nursing education.

Nor should we forget to mention the Crusade for Vocations which the Hospital Association launches each year during the month of May. This year many thousands of copies of the booklet in honor of the Blessed Virgin, Patron of Vocations, went forward to all quarters of the country, and many schools, parishes, hospitals, and other institutions and groups of individuals

joined in the nationwide chorus of prayer to our Blessed Lady, Patron of Vocations, and Chief Helper of Catholic Hospitals. The Medical Mission activities have been chronicled in HOSPITAL PROGRESS and the work of the Catholic Medical Mission Board has been greatly augmented during the year just passed.

The individual members of the Association have in the meantime been continuing their growth and expansion. Every issue of HOSPITAL PROGRESS contains more and more tidings of the growth of Catholic hospitals, the increase of their buildings, the improvement of their schools of nursing, the development of new departments, the better organization of their staffs, the progressive training of the Sisters for hospital work, the opening of new hospitals, and the constant widening of the activities of those already established.

In co-operation with the College of Surgeons, the Association, through its President, Father Moulinier, and his collaborators, has continued to encourage the forward march of the standardization of Catholic hospitals, and it is said by those who are well informed on this subject, that they are in the forefront of those which are making the best efforts to conform in spirit and in deed to the program of hospital standardization.

On the occasion of a pilgrimage to Rome, the present writer related at the Vatican the work, achievements and aspirations of the Catholic Hospital Association and its members, and received from the Holy Father the special privilege of giving to all our Catholic hospitals when he visits them, the Apostolic Benediction.

This progress and these successes during 1925 seem to point the way to a still greater and wider program for the coming year. HOSPITAL PROGRESS, as its name indicates, stands for the best and the noblest in the work of our Catholic hospitals, and is eager to chronicle all their advances and successes. It rejoices in the great work of our Catholic hospital Sisters both for the bodies and souls of suffering humanity, and pledges itself to carry onward and upward the banner of our Catholic hospitals during the Year of Grace which is now commencing.

Problems of Hospital Administration[1]

Malcolm T. MacEachern, M.D., Director Hospital Activities, American College of Surgeons

IN following an itinerary covering thirty-seven states during the past four months I have carefully summarized certain impressions received from the hospital field, particularly regarding the more pressing problems at present troubling the minds of the hospital people whom I met. In addition to this I have carefully analyzed the numerous inquiries and requests for information coming daily to the Hospital Information and Service Department of the American College of Surgeons.

I feel it may be a matter of general interest to the hospital field to touch more or less briefly on each of these problems, indicating, when possible, the causes and some of the remedies which might be applied.

I. The Need for Properly Trained Hospital Executives and Personnel

There is a universal demand for properly trained hospital executives—superintendents of hospitals, superintendents of nurses, assistant superintendents, instructors of nurses, and department supervisors, as well as hospital personnel generally. This is only natural to expect, as we all must realize that hospital administration and its various subdivisions or branches are becoming a more complicated art or science requiring skilled personnel throughout. Indeed, almost all the readers of this article acquired their present-day knowledge and efficiency in their respective fields through years of unguided and, perhaps, sometimes, misguided apprenticeship. The writer carried on more or less for the first four years of his administration, securing his training and knowledge through unguided experience and the reading of Hornsby's book, as well as hospital magazines then available. I suppose, like others, I learned frequently through bitter experience, which might have been avoided had I had fundamental training previously. There is, therefore, today a demand for a more modern method of teaching this work and it is generally recognized that it should be placed on an academic basis.

Up to a year ago very little opportunity was afforded for the training or instruction of hospital executives and personnel in any organized manner. Sporadic attempts were made to supply this much needed training, but in a few instances only did these individual efforts succeed. A short course at Temple University, Philadelphia, for the past two years was of distinct practical value. A more recent permanent step has been taken by Marquette University through the influence of the Catholic Hospital Association. In this University a College of Hospital Administration has been established and a definite curriculum prepared, which sets forth two courses at present—first, a complete course covering four years and leading to a degree, based on the principles set forth in the Rockefeller Report issued in 1923 on the Training of Hospital Executives; second, a shorter course covering one college year, as a post-graduate for those already in the work. The success of this College of Hospital Admin-

[1] A paper read at the Maritime Conference of the Catholic Hospital Association, Halifax, N. S., Sept. 1-3, 1925.

istration is already assured inasmuch as it has the backing and active support of a great University and a strong hospital association. Already a very encouraging number of students are enrolled.

A good beginning has thus been made. Further developments will likely follow, and in a few years I believe none will attempt hospital administration who has not properly prepared himself. A very necessary piece of work which would assist greatly could be undertaken through the formation of hospital councils in the various larger cities of the United States and Canada, such as Chicago, New York, Brooklyn, Philadelphia, Boston, Cincinnati, Cleveland, Detroit, Minneapolis, St. Paul, Los Angeles, San Francisco, Toronto, and Montreal. Councils of this kind are already functioning in several of the cities mentioned and are doing much to provide valuable information in the furtherance of hospital work.

An inventory of the outstanding features of the various institutions in the city could be made by the Council and thus hospital superintendents and personnel seeking knowledge of the work through observation might be greatly benefited in having this information catalogued. The superintendent, going away for a few weeks to brush up, secures a better entry into the hospitals of the city under such conditions and is able to make much more valuable use of the time at his or her disposal. It is, therefore, hoped that the larger cities will organize such hospital councils in order that their facilities may be available for teaching and demonstration purposes.

Refreshing courses of a worth-while nature should be held in different parts of the United States annually, thus affording opportunity to a larger number of hospital superintendents to brush up and keep abreast with the advance of hospital administration in all its phases. Later, with the growing interest taken by the universities in this work, definite courses of instruction will likely develop in all leading universities.

Rapid Turnover in Hospital Personnel

It has been noted in many parts of the United States that there is more or less rapid turnover in hospital personnel, and particularly in regard to superintendents. Following the mailing lists of hospitals very carefully we find that probably thirty to forty per cent of the superintendents in hospitals of one hundred beds or less change their positions during the year. This matter has already been dealt with at length and therefore I shall not dwell on the present-day status of this question other than to say that it is occurring so frequently that I am afraid the efficiency of our institutions is much affected thereby. It is reasonable to expect every institution to secure the best kind of staff and keep it as long as possible. It is a great wastage of time, effort, and money to have too many changes in the personnel of the hospital staff, and every effort should be made to stabilize this particular feature. The present turnover in rank and file of staff may be prevented to a certain extent, through attention to the following conditions:

1. Good living wage and good living and working conditions to the employee.
2. The employing of the married or more settled type of employee rather than the so-called transient.
3. Proper treatment and recognition of staff by attention to social life and pleasant environment.
4. The making of each employee feel the importance of his or her work, and giving the necessary help, instruction, and encouragement to improve the service being rendered by him or her.
5. Good organization with proper designation of duties, functions, relations, and responsibilities, so as to prevent interference from other than authorized sources.

The turnover in hospital superintendents is noticeably very great. The most apparent cause appears to be that of politics or interference with administration and authority. The status of the superintendent has not always been clearly defined. It must be remembered that he or she is the representative of the board or governing body of the hospital, to whom should be delegated full authority to carry out the policy of the institution. Unfortunately the superintendent's authority is not infrequently undermined by politics and unwarranted interference with administration. More attention to clearly defined organization will help to establish the full authority and power the hospital superintendent should have. A comprehensive study of the entire field as to the causes and remedies for the extensive turnover of hospital personnel annually is much needed at present.

Hospital Financing

Up to the present an adequate method of hospital financing has hardly been found which is ideal in every case. The ordinary hospital other than county and state, must provide for the pay, part pay, and free patient. Most hospitals of this type in the United States today do at least from ten to twelve per cent charity work. This amount, together with the additional financial burden of the part-pay patient, leaves quite a responsibility for the hospital to meet without state or municipal aid. The solution tends towards the establishment of county hospitals in sufficient number to take care of this burden, or, as an alternative, the subsidizing of hospitals generally by the state to carry the burden. Money must be provided from some source to take care of the patient who cannot pay the full cost of the treatment. Therefore, some definite source of revenue must be found to meet this obligation, especially as there are not sufficient county or state hospitals to take care of this demand in every community.

The need of more intelligent cost accounting in order to provide a proper knowledge of the cost of services is being advocated on all sides today. Without a definite cost accounting system worked out in a hospital a great deal of the financing must be carried on more or less in the dark. The budget system for hospitals is becoming more generally used and is desirable

where practicable. Concurrent with this there should be greater economy carried on in hospitals.

Privilege to Practice and Appointment to Staff

The extending to doctors the privilege to practice in the hospital and the making of appointments to the medical staff are problems of most serious concern to every institution. Fortunately this matter is receiving more consideration than in former years. It is now recognized that every hospital should take care to whom it extends the privilege to practice therein. The following procedure is suggested:

(A) *Application.* A doctor seeking the privilege of practicing in a hospital should first make written application. This application should set forth among other things the following:

1. Applicant's identification.

2. What college the applicant was graduated from and when.

3. The applicant's experience, such as internship, post-graduate work and subsequent experience.

4. The applicant should give three to five reliable references acceptable to the hospital management.

5. The applicant should signify his willingness to abide by the rules and regulations of the hospital if given the privilege of practicing therein.

(B) *Credentializing.* The staff, or a committee thereof, should consider the application with all the credentials of the doctor in question and all other available data, and then make unprejudiced recommendations to the board of trustees or management of the hospital.

(C) *Appointment.* Appointment to the general staff of the hospital, carrying with it the privilege to practice in the institution, should be made by the board of trustees after due consideration of the recommendations of the staff and all the information before them.

(D) *Grouping.* Having been given the privilege of practicing in the hospital a further analysis of the applicant should be made so as to determine to what clinical group he should be assigned. Care should be exercised in designating whether the new doctor should be permitted to do major or minor procedures. This is a matter that must be given very careful consideration.

All hospitals should have some definite procedure for the consideration of every new doctor wishing to practice therein. There must be a reasonable safeguarding of this privilege.

The selection of the members for the appointed staff is a responsibility of the board of trustees, assisted by an advisory committee of the staff. Such appointments should be made on the following considerations: competency, ethics, loyalty, and patronage. Very careful study should be made of the work that the particular doctor has done in the hospital during the previous year or longer. We can only appraise the doctor's skill, technique, judgment, and therapeutic ability through the records of his past work in the institution where he worked.

Supervision and Control of Clinical Work

The supervision and control of the clinical work in the hospital is dependent on keen, efficient medical organization that functions actively and fearlessly. Usually the staff is divided into active working committees or services that carefully scrutinize the various clinical departments to see that the greatest degree of efficiency is obtained and maintained. The best control of the clinical work of the hospital can be had through the periodic analysis of the clinical work, provided it is thoroughly done in a frank, open, unprejudiced manner. The medical staff of the hospital must exercise definite control of the work through case records, laboratory examinations, and efficient, periodic analysis of the work. The staff must see that incompetent and unnecessary surgery is eliminated from the institution. Rules and regulations for the guidance of the professional work of the institution should be observed. The patient should not be regarded as the sole interest of the doctor in charge. In the modern conception of hospital development today, the patient is the interest of the various groups concerned in providing the aggregate service of all connected with the institution.

Good Case Records

It is a most difficult problem today to secure records of high quality in hospitals. The following conditions are essential for the improvement of the quality of these records:

1. Every person working in or connected with the institution should be thoroughly imbued with the necessity of a good case record.

2. Proper physical facilities should be available for the making of the record such as a record room, suitable forms, and a convenient place in which to do the

New Year's Greeting

Rev. and dear Father Garesché:

Very cordially do I bless your work in Hospital Progress and in the Catholic Hospital Association, and will not fail to recommend both when occasion offers.

May the New Year bring to Progress increased circulation and to the Association a wider sphere for its undoubted power for the corporal and spiritual welfare of those who are cared for in the Hospitals enrolled in it.

With every best wish, therefore, and a most hearty blessing on you and your enterprise, I am,

Yours in Our Lord,

✠ A. J. SCHULER, S. J.,
Bishop of El Paso, Texas.

work, together with the necessary personnel to assist in securing, supervising, and filing these records.

3. There should be a record committee from the staff, willing to assume responsibility for seeing that good records are produced in all cases.

4. It is necessary to have some definite method of appraising records at different periods to see if the quantity and quality is satisfactory. This, of course, should be done daily, but periodic reviews made by the entire staff may be of help.

Having provided the necessary physical facilities for case recording, it is advisable that there should be a constant checking up on this work.

The matter finally resolves itself into an active efficient case-recording organization providing the necessary daily and periodic checking up.

Supervision for the Clinical Laboratory, X-Ray and Other Departments

It is generally recognized today that the clinical laboratory should be under the supervision of a well-trained clinical pathologist, and the x-ray department under the supervision of a medical radiologist. Further, it is also recognized that clinical departments for diagnosis and treatment should likewise be under medical directors having the necessary technical knowledge for the respective departments. The shortage of directors qualified to take charge of diagnostic and therapeutic departments such as mentioned above, makes it necessary to effect combinations of various kinds throughout the field. Such officers may be part-time or full-time, as the work requires. Today I do not believe there is a hospital of fifty beds and over with any excuse for not having adequate supervision of this kind. In most instances this supervision can be readily made, and likewise the financial responsibility distributed by grouping two or more institutions under one director. Diagnostic and therapeutic departments are worthless unless we are assured that the type of work turned out is absolutely of high quality.

Proper, Complete, Systematic Analysis of the Clinical Work of the Hospital at Regular Periods

Much has been said and written in late years regarding the periodic staff conference for systematic review or analysis of the clinical work of the hospital. While this has improved immensely during the past seven years of hospital standardization, there is a great deal yet to be done. The proper staff conference today is characterized by frankness and honesty in the discussion of the various cases and conditions that have not obtained the best results during the period under review. A chairman and secretary, imbued with proper vision and viewpoint, with leadership and initiative, will stimulate a more thorough review of the work if done in the right spirit—that of giving and receiving knowledge for the benefit of all concerned.

The method of conducting the staff conference is what determines the efficiency of the analysis or review of clinical work. The staff conference should cover at least the following phases of the clinical work: (1) The presentation of a report of the work of the hospital for the month on blackboard or through the distribution of the monthly analysis sheet properly filled out; (2) the discussion of patients discharged since the last review period with special reference to infections, deaths or unimprovement; (3) the discussion of the condition of patients in the hospital, such as complications, unusual conditions, or intricate diagnoses.

Post Mortems in Hospitals

Statistics show that the number of post mortems secured in hospitals of the United States and Canada ranges from no per cent to eighty-nine per cent in certain instances. The average, I believe, runs from fifteen to twenty-five per cent. Everybody is convinced that the post mortem is of great value in the advancing of medical knowledge, and all are generally agreed that every effort should be made to secure as many as possible in every hospital. There must be an organized effort if the number of post mortems are to be increased, and this must be augmented by an eagerness on the part of the staff and management of the institution to secure a post mortem in every case possible. The following essentials for the increasing of interest in post mortems and the securing of a larger number may be worthy of note: (1) A proper approach to the family and relatives so as to secure their confidence, their interest, and their trust in the sincere effort of the hospital to find the facts of the case; (2) cooperation with the undertaker in the embalming, preparation, and turning over of the body; (3) elimination from the minds of the friends of any danger of mutilation or disfigurement; (4) utilizing the material and knowledge resulting from post mortems to the advantage of all, and particularly of the doctor whose case it happens to be.

End Results—Better Follow-up Work

It is generally conceded that we are now in the "end result" period in hospitals. Today we are obliged to face our end results more seriously than we have had to in the past. It is only through study of end results that we are able to replenish, readjust, or replace our present-day knowledge. Concurrent with this particular work, we must have a proper follow-up of the patient after discharge. We must remember that we are not through with the patient as soon as he or she has paid the bill and been discharged from the hospital. Future systematic follow-up should be immediately established so that an intelligent appraisal of the end results at the proper time may be readily made and interpreted. This is done generally through examination by the doctor in charge or through correspondence and always, if possible in cooperation with the social service nurse. Unless we submit to a careful study of end results, we will still be working in the dark, so far as medical science is concerned.

Infectious or Contagious Diseases in Wards

One of the bitter problems facing general hospitals today is how to keep their wards free of contagious or

infectious diseases. All institutions have this trouble more or less, and this causes hospital administrators very much distress at times. The following suggestions may be of some help in preventing the outbreak of infectious or contagious diseases in hospitals: (1) A careful history and examination of the patient at the time of admission; (2) placing of all suspected cases in an observation ward until their condition is fully established; (3) daily inspection of all cases in the wards in case of suspicious rash or symptoms; (4) immediate isolation or segregation of any suspicious conditions developing in the ward; (5) proper facilities for quarantine of infectious or contagious cases; (6) proper disinfection after each infection occurring in the ward.

A vigilant supervisor or intern will, in a great measure, prevent infections from becoming widespread in any ward. The superintendent and staff should have a thorough knowledge of all conditions requiring segregation and should take the necessary action without delay when so required.

Fire Hazards in Hospitals

It is reported that one hospital a day in the United States is burned, and not infrequently is there loss of life. It is essential, therefore, that: (1) Hospital construction should be fireproof; (2) buildings not now fireproof being used for hospital purposes should be well provided with fire-escapes, fire-fighting apparatus and such preventive measures as would remove causes for spontaneous combustion or otherwise; (3) the institution of a fire drill is of value in all hospitals and should be organized and kept active throughout the year; (4) many hospitals are introducing the sprinkler system, as to the efficiency of which I am not prepared to speak. Every hospital should be ready beforehand to follow a definite, well-worked-out procedure in case of fire, and every person employed in that institution should be familiar with this procedure.

Community Interest in Hospitals

National Hospital Day, frequent articles in the press, and the publication of hospital bulletins has of recent years aroused more community interest and pride. Many communities, however, are more critical of their hospital than of any other institution. Some communities have little or no pride in their hospital. Every attempt should be made to carry on an organized, systematic educational contact between the hospital and the community. In addition to what has been already mentioned, repeated opportunities during the year for the citizens to see the hospital in its working state will be of inestimable value. Frequent invitations to the public to visit the hospital and inspect the numerous departments would soon arouse mass interest. Every opportunity should be taken advantage of by the superintendent or a member of the board of trustees or medical staff to present the claims of the hospital before community service clubs and other organizations. Community interest, however, is best aroused through good service rendered to each patient treated therein, and an intelligent idea of the workings of the hospital through the many avenues of publicity that are open to hospitals.

New Year's Greeting

Dear Father Gareschê:

I recognize in the Catholic Hospital Association, an organization which seeks to perpetuate, in the field of medicine and nursing, the highest Christian traditions.

It has taken its stand boldly, not only for sane medical progress, but for sound moral principle and for the spirit of charity at the bedside of the sick, as well. As such, it is performing a service of inestimable value to the community.

I take great pleasure in extending, herewith, my heartfelt greetings, with the coming new year, to its Officers and Members, and assurances of my best wishes for its continued growth and welfare.

Sincerely in the Lord,

✣ PAUL P. RHODE,
Bishop of Green Bay.

Adequate Nursing Service

The question of an adequate nursing service for those who are not able to pay for special or graduate nurses is a much-discussed one at present. When sufficient undergraduate nurses are available the need can readily be met. It is, however, found difficult in many instances for certain types of cases, such as the middle class, to pay for the necessary graduate nursing service. Possibly consideration will have to be given soon or later to a system of group graduate nursing by which one nurse can take care of two or three patients at a less rate per day. This has been tried out, I believe, in a few hospitals and I understand it is fairly satisfactory. The proportion of nurses to patients in general hospitals is still very low. We find in most cases the average to be from one nurse to three to one nurse to six patients. I believe the general concensus of opinion today is that it should be at least one nurse to every one and one-half or two patients under ordinary conditions. The problem, therefore, of adequate nursing in most hospitals is still unsolved and needs our concentrated attention.

Obnoxious Legislation

Unfortunately some of our legislators are prompted more by politics than by a consideration of the best interests of the patient, the basis upon which all hospital legislation should be worked out. Many instances are on record where legislatures have endeavored to let down the bars so that everybody who practices the healing art might be permitted to treat patients in the hospital. This is an exceedingly dangerous step to take. Numer-

ous instances of obnoxious legislation might be cited. I have only to refer you to one or two in order to illustrate this point, namely, the bill recently brought before the legislature of North Dakota, also two or three bills before the state legislature of Connecticut. These bills aim at throwing the hospitals open to almost any kind of person carrying the designation of doctor.

The remedy for obnoxious legislation lies in the proper education of legislators and the formation of strong hospital associations to combat such legislation with the assistance of the national association. Not until we have complete, virile, local and national organization in this country can we prevent the obnoxious legislation which has been attempted and indeed, already passed, in certain states. When politics, selfishness, and commercialism influence hospital legislation just then the patient begins to suffer, for no hospital can render efficient service under such conditions.

Conclusion

The foregoing problems are giving hospital administrators serious concern. Administrators are looking for light on these problems. This light can only come from the various hospital organizations and group conferences, deliberating at length on all aspects of each problem arising. The state associations and the national associations find numerous problems which may be advantageously worked out together.

Hospital Fires — Causes and Cures

C. W. Burnham[1]

FOR years it has been my privilege to make a careful study of fire protection in institutional buildings; to make detailed inspections of many of each type; to study reports covering hundreds of similar inspections by expert fire prevention engineers, investigating committees, fire marshals, and others; and to glean from the daily news and many other sources, thousands of items concerning this subject.

During this time it has been gratifying to see the trend toward better construction and arrangement in planning new buildings; the increasing use of automatic sprinkler systems and other approved means of fire control; and the general growth of interest on the part of institutional managements and the public in safeguarding such properties and their inmates from fire danger.

But—in this same time there has accumulated the tremendous file of fire reports now before me, covering thousands of fires in institutional buildings throughout the United States and Canada. These tell of property losses totaling many millions of dollars, and of hundreds of persons, from new-born infants with their mothers, to the helpless aged, cremated in flames or dying in horrible agony after thrilling rescues.

I have seen earnest men point out existing hazards to incredulous managers and apathetic political supervisors. I have noted how these hazards ultimately resulted in devastating fires, causing heavy loss of public wealth and snuffing out precious lives in frightful deaths. And I have watched with hope, pity, and contempt, the resulting storms of public protest, the fevered activity in the making of "investigations" and promises, the adroit "passing the buck" by all responsible, the usual quick loss of interest in the matter, and the continuance of existing hazardous conditions with little improvement.

[1]Special Agent, Hartford Fire Insurance Company, Hartford, Conn.; Member, National Fire Protection Association Committee on Public Information.

Two Institutional Fires Daily

The fire records of recent years show that an average of two institutional buildings burn each day. One or more are probably burning as I write—and here it is, bitter cold with a high wind blowing. With this mass of tragic testimony before me, I see in retrospect the hospitals and institutions which I have known among the many thousands in America, and wonder—*which one next?*

Many of the worst institutional fires have been predicted by competent men who have pointed out probable causes and results well in advance. Neither causes nor results show much that is new to those familiar with the subject. Most of the hazards existing in modern institutional buildings have been recognized for years, and standard safeguards devised for each.

Many competent writers have already covered the subject of this article thoroughly. But new institutions continually arise, those responsible for the management move on as the rising generation assumes responsibility, and if in this short article I can give information or arouse interest that will lead to increased safety from fire in even one property, my time is well spent.

The Causes

All matters of fire protection can be grouped logically under three headings:

Causes—such as lighting and heating equipment, combustible and explosive substances, etc.

Spread — covering building construction and arrangement, protection of openings, etc.

Extinguishment—covering means of discovery and alarm, extinguishing apparatus, fire brigade, organization, etc.

Space here permits detailed discussion only of causes and their remedies. Let me emphasize that each hazard listed is real rather than theoretical; each has been found hundreds of times in actual inspection, and each is definitely known to have caused many fires.

Heating Hazards

Heating equipment of various kinds has been responsible for more than a thousand institutional fires during the past ten years. Here are a few recent instances:

Farnham, Quebec, Canada: Caused by defective chimney; fire spread rapidly and there was terrible panic as patients and attendants fought for exits; *twenty-seven killed and many little children horribly injured by jumping from upper stories.*

Gallipolis, Ohio: Two-story frame building; caused by defective flue; property loss $5,000; *eight killed and two injured.*

Pittsburgh, Pa.: Caused by explosion of hot water heater in basement; property loss $100,000; *two killed and eighteen injured.*

Lexington, Ky.: Started from defective flue in attic at 2:40 A. M.: high wind and cold weather; building old fire trap; property loss $6,500: *three children killed.*

Heating and Cooking Equipment

Boilers and furnaces should be in separate boiler houses wherever possible. When they are in main buildings they should be in fire-resistive rooms entirely cut off from the rest of the building. Where oil is used for fuel the management should be certain that the entire installation conforms to the standards of the National Board of Fire Underwriters, as the hazard is severe. Five lives were lost in one institutional fire caused by the breaking of a fuel oil pipe in the basement boiler room. All heating equipment should be carefully supervised and kept in repair by a competent engineer.

thoroughly cleaned each fall before fires are started, and all unused holes in chimneys should be bricked up, not stuffed with paper or rags, as they sometimes are. Chimneys should also be watched for cracks which occasionally occur through settling of the building.

Chimneys should always be built from the ground on solid foundation, with eight-inch brick walls and flue lining, except in one-story buildings with ordinary stoves, where four-inch brick walls with flue lining are sufficient. No woodwork should ever be imbedded in chimney walls. All chimneys and stove-pipes should be thoroughly cleaned each fall before fires are started, and all unused holes in chimneys should be bricked up, not stuffed with paper or rags, as they sometimes are. Chimneys should also be watched for cracks which occasionally occur through settling of the building.

Stacks and stove-pipes should have a clearance of one-half their diameter, from all woodwork. Where passing through or close to woodwork, they should be rigidly supported at proper distances, and should never run through closets, attics, or other concealed spaces. Stove-pipes should be staunchly upheld for their entire length, and all joints securely riveted. Stacks should have spark arresters.

Steam Pipes a Danger

Steam pipes are a real fire hazard, notwithstanding the incredulity of many property managers. The list of fires from this cause is long. Where they are in contact with wood, this is converted, sometimes very slowly, sometimes quickly, to charcoal, which ignites spontaneously. Proper air space should be provided between all steam pipes and woodwork, and pipes should be tightly held in proper position by metal hangers or collars to guard against contact by sagging of pipes or building. The hazard of boxing in radiators is apparent.

Small stoves and warming plates using gas, electricity, kerosene, or alcohol are often found. These should be eliminated as far as possible. Where necessary, steam or electricity is preferable. All should be on non-combustible supports with proper clearance from woodwork. Where the use of kerosene and alcohol heaters is necessary, these should be kept clean, carefully supervised, and filled only outside of buildings and by daylight.

Precautions in Laundries

Laundries have been a prolific source of fires and should be located in separate buildings as far as possible. All steam pipes should be arranged as explained. Clothes dryers should be entirely of metal with wire screens for pipes, kept clean and free from lint, and vented to the outside air. Stoves for heating irons should be arranged as previously stated, and fires put out when the ironing is finished.

Flames of gas mangles should be guarded, and mangles kept clean and free from lint. Rubber tubes should never be used for gas appliances if avoidable. Wherever possible use rigid pipe connections. Where flexible connections are necessary, use the best quality of heavy rubber tubing with a shut-off at the pipe end.

Gas irons should not be allowed. Even electric irons are very hazardous and caused 50,000 fires in all kinds of properties during the past year. Such irons will become red hot very quickly if left with the current on, and should always have a prominent red pilot light

New Year's Greeting

Dear Father Garesché:

I have been always interested in the Catholic Hospital Association. I think it has helped our Catholic hospitals a great deal. I gladly give you my endorsement and blessing for the work you are now undertaking.

With every good wish,

Yours sincerely in Christ,

✠ JOHN B. MORRIS,
Bishop of Little Rock.

in the circuit to each iron, to show when the current is on. Non-combustible stands with at least six-inch clearance should be provided for all irons. Nurses and attendants should be prohibited from using electric irons in their rooms. When it is necessary, irons should be properly arranged for their use.

Laboratories are often the seat of fires. Only persons understanding the hazards of all chemicals used should be allowed there. Bench and table tops should be of slate or other non-combustible material.

Matches and Smoking

This hazard is responsible for about thirteen per cent of the fires in hospitals and similar institutions. Recent examples are:

Dunning, Ill.: Probably caused by smoking in supply room; building soon to have been torn down; frame construction, oil-soaked floors, woodwork varnished, etc.; 388 patients; preparing for Christmas; several died in jam at inward opening doors; property loss $100,000; *nineteen killed.*

Notre Dame de Grace, Canada: Probably caused by match; property loss $1,000,000; 400 patients exposed in snow until they could be cared for; *one woman killed.*

Providence, R. I.: Caused by carelessly discarded cigarette; *one automatic sprinkler extinguished fire with less than $100 loss.*

The ordinary "strike anywhere" match should be absolutely prohibited. Safety matches only should be used, and friction lighters should be provided for gas stoves and lights. Great care should be taken that irresponsible inmates do not obtain matches.

Smoking in bed by patients and help should be strictly forbidden, and no smoking should be allowed inside of buildings except at certain safe locations designated as smoking rooms.

Lightning

About ten per cent of hospital fires are caused by lightning. Recent examples:

Beaufort, Quebec, Canada: A 150-foot chimney dropped upon the building when struck by lightning; *one killed.*

Flint, Michigan: Five-story brick building; low water pressure; property loss $400,000.

In spite of popular scepticism, it is now clearly established that lightning rod installations made in accordance with the rules of the National Board of Fire Underwriters, render a building practically immune from damage by lightning. Especially should such equipment be provided for isolated buildings and those located on elevations.

Sparks and Open Fires

Sparks and open fires are also charged with causing about ten per cent of the fires. Recent example:

Boone, Iowa: Sparks from chimney ignited shingle roof; building destroyed; property loss $21,000.

Sparks from chimneys, lodging in wooden shingles, have started many terrible fires. Keep all chimneys clean and use only non-combustible roofing. Rubbish, waste paper, soiled dressings, etc., should be burned only under boilers or in properly constructed incinerators. If open fires are necessary, these should be carefully watched while burning, and extinguished before they are left.

Electricity

Electricity, like fire itself, when properly controlled is one of mankind's greatest blessings. But misused, it becomes a demon of destruction. It is responsible for a long and tragic list of fires:

Ward's Island, New York City: Probably started by break in wiring from shock of near-by blasting; four-story building, 50 years old, and over-crowded; automatic sprinklers had been recommended, but—*twenty-seven were killed.*

Winfield, Kansas: Started at 10:30 P. M. in four-story brick and stone building, from defective wiring; water pressure low; 400 children escaped; property loss $110,000.

Columbia, S. C.: Caused by defective wiring; one ward building destroyed; *ten killed and many injured.*

Grand Rapids, Mich.: Started from defective wiring in laundry; children locked in rooms on third floor; property loss $25,000; *five children killed and three injured.*

Electrical installations and repairs should be made only by licensed electricians and in strict accordance with the National Electric Code. Wiring should be well maintained and rigidly supported in proper position; damage to, or deterioration of insulation should be guarded against. Fuses of proper amperage should be used, and frequent, thorough inspections by competent electricians should be made if the danger from this source is to be minimized.

Flowing electric current generates heat. In properly installed wiring, the insulation provided is sufficient protection from the heat generated. In resistance grids, lamps, etc., the heat is often sufficient to ignite combustible material near-by.

The flowing of current through kinked and twisted wiring and poorly made joints and connections, often causes heat enough to start a fire. Kinks in wiring, contact with metal or other wiring, and the use of paper shades, are a few of the dangers that can be easily guarded against. Drop cords and extension cords should be kept free from contact with pipes, nails, etc., and should never run through doors, windows, or in other places where they are subject to mechanical injury. As far as possible, all wiring should be enclosed in conduit or armored cable. Switch and fuse cabinets should be of metal, and kept closed. Where portable lamps are used they should have wire guards to prevent breakage and contact with combustible material.

Oils and Hazardous Materials

More than six per cent of the fires come under this heading. Recent examples are:

New York City, N. Y.: Bottle of ether ignited from candle in hands of nurse; prompt action averted severe loss.

Livermore, Calif: Caused by carelessness in handling oil; concrete building with wooden interior; started at 5:30 A. M.; nearest hydrant 1,200 feet away; property loss $39,000.

Nashville, Tenn.: Nurse lighted a match while drawing alcohol in a closet; *the nurse and several patients were killed.*

All supplies of oils and paints should be kept in a special, non-combustible, oil storage house, removed from main buildings. If a paint shop is maintained it should be located in a small, separate building. Oil for elevator machinery should never be stored at the bottom of the shaft, as it sometimes is. Oil-soaked rags, clothing, wood, etc., should be promptly disposed of. These should be especially watched where painters are working, and should never be left in buildings over night.

Storing Inflammable Supplies

Wherever inflammable volatiles, such as alcohol, ether, turpentine, gasoline, etc., are stored or handled, there is grave danger. Such storage should be outside of main buildings. Every danger from sparks or flames from matches; smoking; sparking motors, switches, and other electrical equipment; open lights; striking of metal on metal, stone, or concrete; etc., should be guarded against. Absolutely prohibit smoking or carrying of matches in such places.

Allow no motors, switches, or other electrical equipment except wiring in conduit to stationary light with vapor-proof globe and metal guard, switch for such light to be outside. These dangerous liquids should be taken inside buildings only in the minimum quantities necessary for use, and in approved safety cans. Where gasoline is kept on hand for ambulances and other cars, it should be in a standard, buried tank with a standard pump outside the buildings.

Naphtha and benzine are sometimes used as solvents in rubber cement for repairing rubber gloves, water bags, etc. They should be carefully guarded against, and never allowed in main buildings. Cleaning with gasoline should be prohibited in all buildings, and care should be taken to see that metal polish used is non-inflammable.

Floors should not be oiled, but if they are, use only approved mineral oil.

Spontaneous Combustion

Spontaneous combustion is likely to occur wherever vegetable oils come in contact with porous, organic material, such as cotton waste, cloth, sawdust, etc. This hazard alone causes an additional three per cent of all hospital fires. Linseed oil is the most common offender and the cause of the frequent fires starting in painters' clothing.

Chemicals which are dangerous from a fire standpoint, especially those which oxidize readily and have explosive properties, should not be kept in the general supply or drug room, but should be locked up in the safest place available.

Cotton cloth, gauze, wool, and flannelette ignite readily from spark or flame, and burn rapidly. At least one hospital fireproofs such materials with a simple chemical formula. Untreated cotton should be carefully guarded from sparks, and large supplies should not be allowed in main buildings.

A Warning About Films

X-ray and motion picture films, and articles made of celluloid, constitute severe hazards. Films are subject to spontaneous combustion if not kept cool. All films not in use should be preserved in a special, isolated, insulated, non-combustible building of light construction, well ventilated, with all openings screened and shaded from sunlight. This building should be locked, and no artificial light allowed inside. Only the films in use should be permitted in main buildings, and these should be in metal containers. Films are not only highly inflammable but also generate explosive gases and stifling fumes when burning.

Motion picture films should be used only in an approved machine, in a standard booth, by licensed operators. Films not in the machine should be kept in tight, metal containers. Film scraps should be promptly removed. Smoking in the booth should be prohibited, and there should be frequent inspection of the automatic stopping device on the machine, automatic shutters for peep-holes, etc., to see that all are in order.

Articles made of celluloid, such as lamp shades, picture frames, toys, and toilet articles, should not be allowed in buildings.

Gas

Gas used otherwise than for heating is responsible for about four per cent of the fires. For example:

Marlin, Texas: Gas explosion in sterilizing room; *seriously injured the superintendent.*

Louisville, Ky.: Brick building partially destroyed; *two killed.*

The explosion hazard is always present where gas is used. The watchman and all attendants should understand the danger of gas leaks, and promptly report them. Flexible rubber tubing should not be used if avoidable. Where gas is used for lighting, all brackets should be stationary, burners at least twelve inches from combustible material, with wire guards for flames, and heat bells or other protection for the ceiling above, where the distance is less than two feet. Swinging brackets and portable gas lamps should not be allowed.

Gas meters should be securely mounted on non-combustible supports, with iron pipes (not lead) to both connections, electrically bonded and grounded to guard against the possibility of the current's entering the meter. Outside shut-off valves should be provided and

their operation in case of fire thoroughly understood. Where inmates are children or mentally defective, gas fixtures should require a special key for operation, and flames should be out of reach.

Gasoline vapor and acetylene lighting systems entail severe fire and explosion hazards, and should be replaced by standard electrical installations.

Incendiarism

Incendiarism is sometimes alleged in institutional fires, generally because of existing prejudice or lack of definite evidence as to the cause. In one instance a girl inmate fired oil-soaked rags in an attic, planning to escape during the excitement. About two per cent of institutional fires are classed as incendiary, most of them probably occurring where mental defectives are cared for.

The Cure

A long list of minor causes and typical fires could be continued, but certainly those already given are sufficient to convince any reasonable person of the following:

That there has been and still is, criminal neglect on the part of many who are responsible for fire safety in institutional buildings, and

That present conditions are due principally to: (a) lack of interest; (b) lack of knowledge; (c) lack of funds.

The interest can be stimulated by any earnest and tactful person connected with, or interested in, an institution. Such action is both the duty and high privilege of all who read these words.

The knowledge necessary for intelligent action toward improvement is technical and complex, as the foregoing discussion of fire causes shows. A man must give years to the study and practise of fire protection before he is competent to advise on the whole problem in an institutional building.

Political appointees are seldom competent, regardless of their position. There are fire marshals and chiefs who have given the subject careful study. There are consulting experts who charge a fee for their services. And there are the service departments of the older and larger insurance companies, whose engineers are perhaps best fitted for counsel on such problems, and whose services are available free of charge through the local insurance agency. They can make a complete inspection and analysis of all factors affecting fire cause, spread, control, and safety to life in any institution, discussing all matters in detail and submitting a complete report of their findings and recommendations.

A Plea for Action

But neither interest nor knowledge will make institutions one bit safe without action, and action on many of the recommendations will require funds, though very often tremendous improvement can be secured with slight expense.

Only care is necessary to eliminate many of the hazards. Structural changes and installation of extensive equipment cost money. But where can be found a better investment? Can you balance a human life against a few dollars; or the cost of replacing buildings and equipment against the cost of improvements needed to insure their permanence?

Records show practically all institutional buildings to be greatly under-insured. And even should fire occur with full insurance to value and no loss of life, what compensation is there to the community for the absence of the institution until it is rebuilt, or to the public which pays the fire premium tax, for a public asset irrevocably lost?

Solving the Financial Problem

The following suggestions can generally be used to solve the financing problem:

(a) Under the modern system of fire insurance rating, practically every real improvement made, will, in a few years, pay for itself through economy in fire insurance cost.

(b) Persons of means are continually making bequests to all kinds of institutions for additional buildings and equipment. A clear understanding of existing hazards should secure from such persons, substantial assistance toward making the needed improvements.

(c) The public is not slow to give generously to drives for hospitals and other institutions. What man or woman understanding the need, would refuse a contribution to save a worthwhile institution and prevent the sacrifice of helpless people in horrible death?

The Management Responsible

The information and the warning given here have been broadcasted throughout the land. Still our institutions burn, two a day, with staggering loss of life and property. Will your institution burn tomorrow, or next week, or next year? Or have you already done everything possible to make it *safe*? Remember that many of the fires on record occurred in institutions which were considered superior.

NURSES OF LYNN, MASSACHUSETTS, HOSPITAL BEING TAUGHT TO USE FIRE EXTINGUISHERS.
Monthly fire drills are given to the nurses at this hospital, usually under supervision of Chief Edward E. Chase of the Lynn Fire Department.

Physiotherapy Has Arrived, But Where Are the Physiotherapeutists?

John Harvey Kellogg, Superintendent of the Battle Creek Sanatorium, Battle Creek, Mich.

PHYSIOTHERAPY is at last coming into its own. Out of the murk and slime of empiricism it has risen to the very highest levels of rational therapy. Somewhat more than a century ago Priessnitz, a peasant boy of Austrian Silesia, was bathing broken arms and legs and old sores with a wet sponge and repeating cabalistic words and was imprisoned for practicing magic, but his fame as "the doctor with the magic sponge" had become so widespread that it continued to grow although he was required to dispense with the magic cabalistic phrases, and after some years of observation the sagacious peasant discovered that the healing virtue was neither in the magic sponge nor even in the water but in the reaction of the body to the cold applications made to the skin.

WILHELM WINTERNITZ, THE FATHER OF SCIENTIFIC HYDROTHERAPY.

Hydrotherapy was in those days very properly known as the "cold water cure." Priessnitz knew nothing of diagnosis or pathogenesis, but he did understand reaction, and he carefully tested every patient with reference to his power to react before arranging his program of baths. In this respect his methods were more scientific than the methods in use in most resorts and even in hospitals where hydrotherapy is at present employed. I recall some years ago a visit to a large army hospital equipped with a very complete and expensive hydriatic apparatus department. As soon as I reached the hydriatic department I was surrounded by nurses who eagerly besought me to tell them how to use hydrotherapy. They said, "You know the doctors send patients down here to us with instructions to give them hydrotherapy, but we do not know what to give them. How can we find out what they ought to have?" Of course the best I could do was to give them a few hints about what not to do, for it would seem to me as much the duty of the doctor who prescribes hydrotherapy to indicate the nature of the procedure desired, the temperatures to be employed, and the duration of the application as to indicate when prescribing medicine the name of the drug and the size and frequency of the dose.

Hydrotherapy is a powerful therapeutic means. It produces most profound effects upon the functions of the body. Every function, without exception, may be influenced by it, and to a very marked degree, and nearly all of its effects, whether the applications are hot or cold, are the result of reactions, nervous, vascular, nutritive, etc.

Priessnitz wisely gauged his prescriptions according to the capacity of his patient for reaction to cold. No better single means exists today for forming a judgment as to the intensity of treatment suitable for a newly acquired case. Even distinguished clinicians seem to have overlooked the importance of making use of this simple test before applying strong hydriatic measures. I am tempted to relate a somewhat amusing incident which well illustrates this point. Some twenty years ago I happened to be called to see in consultation the mother of a prominent citizen in Charleston, West Virginia. I found a pale, emaciated, nervous woman, bedridden for months, dying from cancer of the uterus. The instant the introduction was over, before I had had an opportunity to get any information about the case, the patient, turning her face toward me, with a very anxious, determined look said, "Now, Doctor, don't you prescribe a wet sheet pack for me as Dr. Osler did for I shall rebel."

Greatly surprised I asked for an explanation. I was told that the great and learned clinician had been called to see the patient a few weeks before and had actually prescribed a cold wet sheet pack as a tonic. "Yes," the lady said, "he told me just how it would be done. First a blanket would be spread upon the bed, then a sheet would be wrung out of very cold water and spread upon the blanket, and then I would be placed upon the sheet and the wet sheet would be wrapped around me, and then the blanket, and I would be tucked in so tight I could not move, then I would shiver for about a minute and after that I would feel a glow of warmth permeating my whole body and I would fall off into a sweet slumber and awaken a half hour later greatly refreshed."

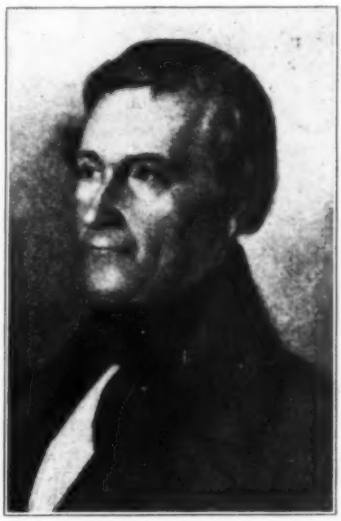
"Well," said the lady, "I did not like the idea of cold water very well, but it sounded so enticing as the Doctor told me about it in his most charming manner that I tried it, but I never will do it again. Instead of warming up after a minute or two as the Doctor said I would, I shivered and my teeth chattered for half an hour, then I could not stand it any longer and insisted on being taken out. It nearly killed me. No more cold packs for me."

Evidently the poor, bloodless patient had not vitality enough to react to such a severe refrigerating measure. A carefully administered wet hand rub or a cold mitten friction after a suitable preparation might

have done her some good, or at least would have done no harm.

Really, I was not so much surprised as I might have been had I not often in consulting Professor Osler's unrivaled work on the practice of medicine frequently encountered the remark, after various remedies had been recommended, "If after making use of the means suggested the patient is no better, try hydrotherapy."

Evidently Dr. Osler had a general acquaintance with hydrotherapy and had faith in its merits but he had not had an opportunity to make himself familiar with its technic. And here is the great obstacle that stands most in the way of the progress of physiotherapy. The impression seems to be general among physicians that the only thing necessary for the administration of physiotherapy, hydrotherapy, phototherapy, electrotherapy or whatever it may be is suitable equipment. It would be just as reasonable to imagine that proximity to a drug store would give an untrained man an adequate knowledge of pharmaceutical preparations, their proper dosage and the indications for their use.



VINCENT PRIESSNITZ, THE PIONEER OF HYDROTHERAPY.

Physiotherapy covers a broad field, a field which comprises not only chemistry and physics but must likewise include a thorough knowledge of physiology. To undertake to practice physiotherapy without an adequate knowledge of physiology is the grossest empiricism, yet I fear that a pretty large proportion of our present-day physiotherapeutists are decidedly empirical in their methods. This is the natural result of the neglect of our medical schools to give students the proper training in hydrotherapy, electrotherapy, radiotherapy, phototherapy, dietetics, medical gymnastics and mechanotherapy and the various other branches of physiotherapeutics.

Each one of these subjects covers a field of considerable magnitude, greater by far both in extent and in therapeutic value than the materia medica upon which so much emphasis is laid.

In fact the field of physiotherapy is becoming so broad it begins to be a question whether the ordinary practitioner will ever be able to master it, or whether he can be expected to obtain more than a smattering of general principles.

Dietetics, one of the most important of all the several branches of physiotherapy, has already passed into the hands of specialists. It is now becoming quite the fashion in large hospitals—sometimes in small ones—where competent diet specialists are in charge, for the physician to turn his patient over to the dietitian with general instructions to reduce or to fatten, to build up the blood or to combat acidosis by dietetic measures.

It may be that the best solution of the problem will be found in the development of physiotherapy specialists, hydriatic or electrical or radio technicians, who are able not only to manipulate skilfully the equipment and to execute all the varied procedures peculiar to each branch but who are likewise able to make appropriate adaptations of these powerful therapeutic means to meet individual indications. Such specialists would require as a foundation an up-to-date knowledge of physiology and physics, especially in the field of radiology but also of physiologic chemistry and food chemistry, in addition to a good general knowledge of medicine.

After having spent more than a half a century in studying, practicing, advocating and trying to improve various branches of physiotherapy, I feel that the era of physiologic therapeutics has at last arrived, and I am strongly of the opinion that the great developments in therapeutics for the future will be in the field of physiotherapy rather than that of materia medica.

Young physicians who are ambitious to achieve fame and distinction in the profession will find in physiotherapeutics a field for original research and development such as is afforded by no other branch of medicine. Every branch of medicine is waiting for the vitalizing impulse which physiotherapy can give to it. The old materia medica, with the exception of a few time worn and useful drugs, is moribund and superannuated. Up-to-date internists are everywhere eager to utilize the resources of physiotherapy so far as they can be made practically available to the general practitioner. Surgery is busily gathering in and utilizing physiotherapy in various forms, both as principal surgical agents and as accessories. The manufacturers of physiotherapeutic appliances are equipping doctors' offices everywhere with physiotherapeutic apparatus. What is most needed now is the addition to medical college curricula of adequate courses of instruction for third and fourth year students and well organized postgraduate schools where practitioners can acquire by a few months' study a practical knowledge of rational physiotherapeutics.

Our medical schools also neglect to lay a proper foundation for physiotherapy by the teaching of medical physics along with socalled medical and physiological chemistry. Physiology, also, needs to be taught with a different emphasis to enable the student to appreciate the supreme value of hydrotherapy, electrotherapy, dietotherapy and other physical agents as means of influencing nerve action, blood supply, gland activity, and all forms of metabolism, both anabolic and catabolic.

Nephritis and Kidney Insufficiency

F. D. Murphy, M.D.[1]

EVER since Bright, in 1827, gave his classical description of nephritis a great many articles have been written on the subject. It is a fact worth mentioning that Bright's clinical description of nephritis has not been very much improved on; most of the literature deals with the elaboration of theories and the development of new tests. Until recently the study of the *structure* of the kidney of a patient dying of nephritis attracted the attention of most doctors; today, I believe the study of the *functions* of the kidney is given more attention than that of tissue changes. A knowledge of the function of the kidneys is almost imperative before one is in a position to interpret the clinical phenomena of Bright's disease. As the function depends to some extent on structure, an understanding of the anatomical peculiarities of the chief tissues of the kidney is also very necessary.

The kidney is made up of a large number of glomeruli or filters with attached tubes that pass through the cortex and medulla, and end in collecting tubules which open into the pelvis of the kidneys. The glomerulus and attached tubule form the kidney functioning unit; these make up the parenchyma of the kidney; they are supported by a framework consisting of connective tissue and blood vessels, which is called the interstitial tissue. In view of the fact that most of the symptoms of nephritis are brought on by disturbed function of the kidney, we will consider briefly the physiology of the kidney.

Complete knowledge of renal function is not at hand; therefore one cannot evaluate with certainty all the signs and symptoms of the disease of kidneys; however enough physiology is known to enable a clinician to deal intelligently with these cases. When the function of the kidneys is more completely understood, then physicians will be able to diagnose and treat their patients more efficiently.

Bowman,[2] in 1842, brought out the first theory of renal secretion; he said that the glomeruli secreted water and that the tubules secreted the solids such as urea and uric acid. This theory received the support of Heidenhain, who in 1878 brought experimental data to sustain Bowman's ideas. Therefore this theory has been called the Bowman-Heidenhain theory, also is known by the name, Vital Secretion Theory of Heidenhain. Ludwig, in 1844, advanced another theory of the secretion of urine. He held that in the capsules the proteins were filtered off from the water and other ingredients of the plasma which were concentrated by the reabsorption of most of the water back into the blood. This is called the filtration theory of Ludwig. These schools differed very little concerning the action of the glomeruli but differed greatly in their conceptions of the function of the tubules. Ludwig held that the chief function of the tubules was absorption of water while Heidenhain believed them to have secretory activity. Both of these theories had ardent supporters, and each group tried to outdo the other in bringing up experiments and arguments to support their respective views. No agreement was arrived at. Cushny[3] then, in 1917, formulated the third or as it is called, the Modern Theory of the secretion of the urine; he combined the Ludwig and the Bowman-Heidenhain views to some extent. This conception is quite commonly accepted today, not that anyone believes that the last word has been said but it explains things fairly well. Abbreviated it is as follows: The glomeruli act as filters which allow the water, along with urea, uric acid, sugar, salt, etc., to pass through; the colloids are retained; as the filtrate passes down the tubules, a good deal of water is reabsorbed along with substances which are of use to the body, such as sugar, and salt; these Cushny called the "Threshold Substances"; those constituents of the filtrate that are of no further use to the body, e.g., urea, uric acid, are carried off as urine; these he called "Non-Threshold Substances."

Professor Richards[4] of the University of Pennsylvania has recently confirmed to a great extent Cushny's theory and has added new light on the physiology of the kidneys. He has shown that the filtrate obtained by inserting a very small quartz pipette through the capsule into the glomerular sac, actually contains urea, sugar, and after injection, such dye material as phenolsulphonephthalein. Furthermore, he has shown that the glomeruli do not all act at once, but that a few function for a short time only and then rest, while the load is taken up by fresh glomeruli. This explains the large margin of reserve in the kidney.

It is said that there are present in each kidney 2,000,000 glomeruli or filters or 4,000,000 in all. The filters with attached tubes must do the work of the kidneys. Experiments prove that about one-fourth of those could do the work adequately but would have to work continuously. When a large number of functioning units are incapacitated by disease then the remaining units have to carry the load of the whole number; if they are unable to carry the load adequately then kidney insufficiency sets in. This leads us to a consideration of the diseases of the kidney which handicap the activity of the glomeruli and tubules. It seems best that we should deal from now on with two conditions which are often spoken of as one; they are, first, nephritis, or inflammation of the kidney which interferes with the kidney's action; and second, kidney insufficiency which comes only when a large number of the working units are incapacitated and the remaining few are not capable of handling the load. In other words nephritis may be

[1]Assistant superintendent and medical director of County Hospital, Milwaukee, and associate professor of medicine, Marquette University School of Medicine.

[2]This and all following references are to the bibliography following the article.

present but the kidney still may be capable of carrying the load. This is seen in cases of acute glomerulo-nephritis (see page 16) following throat infection; here a certain number of glomeruli and tubes are destroyed; others in adjacent areas are congested and not functioning; nephritis and kidney failure both are present; then under treatment the load is released and kidney failure passes away and as the nephritis heals, some of the functioning units probably return to normal, some glomeruli however are permanently damaged. The patient becomes re-infected, say in five years or so, and the process is repeated with the result that more units are permanently injured. If this process continues, permanent kidney insufficiency with death follows but only after enough of the functioning units, let us say 3,000,000, are incapacitated permanently. It is known that nephritis brings on changes in the whole body and kidney function may be somewhat affected by extrarenal factors, for example heart failure, anemia, and metabolic diseases. It is nevertheless true that one can better visualize the kidney disturbances by considering the functional capacity in terms of destroyed functional units.

An analogy has been drawn by Pepper[5] between chronic endocarditis (heart valve deformity) and heart failure on one hand, and nephritis and kidney insufficiency on the other. There is no heart failure, no matter what valve deformity is present, providing that the heart muscle is able to compensate for the deficiency produced by the deformed valve; when the heart's reserve is gone, heart failure comes; so it is with the kidneys. The analogy, I believe, may be carried further; we know that certain types of valve defects are followed more quickly by heart failure than others, such as aortic and mitral stenoses; therefore it is important to elicit, if we can, the type of valve disease. Certain types of nephritis are more often and more quickly followed by renal insufficiency; therefore it becomes important to know what kind of nephritis one is dealing with.

It is best then to classify nephritis in some way so that the prognosis and treatment may be properly arranged. Classifications are very numerous and practically every doctor has one of his own. The difficulty with classifications lies in the fact that the disease is generally a progressive one and symptoms change as time goes on, so that a patient may belong to one class in the beginning but to another within a few years. The following is a simple classification which seems very satisfactory, because practically every nephritis can be assigned to some one of the groups. This classification is similar to one recommended by Stengel,[6] except for the cardio-renal group and a few other changes. Some may feel that the cardio-renal group should not be included in a discussion of nephritis, but because renal insufficiency is present in the course of the disease it is considered here.

ACUTE NEPHRITIS

A. Tubular Nephritis
(May follow bichloride of mercury poisoning, or infections, especially typhoid.)
1. Oedema.
2. Heavy Albumin.
3. Many epithelial cell casts and few R. B. C. Many W. B. C.
4. Blood Pressure not elevated.

B. Glomerulo Nephritis
(May follow acute, or subacute infections, e. g., streptococcic sore throat.)
1. Dropsy.
2. Heavy Albumin.
3. Hematuria, many casts.
4. B. P. 190/120.
5. Visual disturbances present at times.

CHRONIC NEPHRITIS

A. Tubular or Nephrosis
1. No excessive B. P.
2. Dropsy.
3. Heavy Albumin, few blood cells.
4. Blood urea normal.
5. Heart normal.
6. Visual disturbances not present.
7. Prognosis good.
8. No uremic tendency.

B. Glomerular
1. Elevated B. P. 240/120.
2. Dropsy (marked at times).
3. Heavy albumin, many R. B. C. and casts.
4. Blood urea elevated.
5. Heart somewhat enlarged.
6. Visual disturbances prominent.
7. Prognosis bad.
8. Uremic tendency.

C. Arteriosclerotic Nephritis
1. Associated with long continued high blood pressure.
2. No dropsy.
3. Nocturia, quantity of urine normal.
4. Trace albumin, few casts.
5. Blood urea elevated.
6. Heart greatly enlarged.
7. Tendency to hemiplegia and heart failure.
8. Age, generally about 50.

D. Cardio-renal
1. Follows arteriosclerosis with high pressure or arteriosclerotic nephritis.
2. Dropsy, dyspnoea, enlarged liver and other evidence of heart failure.
3. B. P. high 240/120.
4. Heavy albumin and many casts.
5. Blood urea elevated.
6. Response to diuretics and heart tonics is marked.
7. Tendency to die of heart failure.

As stated above, these types are not always clear cut and often there are combinations of different types present. The symptoms of each group do not depend so much upon the type of anatomical change of the kidney, as they do upon the number and capacity for function of those uninjured units; the extrarenal factors, for example blood pressure and heart action, influence symptoms a good deal. There are, however, certain definite clinical features associated with these divisions of the nephritides.

Let us consider the acute tubular nephritis; this condition follows bichloride of mercury poisoning, or may follow typhoid, pneumonia, other infectious diseases, pregnancy, or the cause may not be apparent. It is characterized by heavy albumin, few R. B. C., no elevation of the blood pressure, few casts, marked oedema; the prognosis is good; and calcium chloride favorably influences the oedema in some cases. It has been shown experimentally that the tubules regenerate rapidly, probably this accounts for the good clinical prognosis in these cases.

Acute glomerular nephritis follows very often the streptococcic infections of the throat, scarlet fever and

other infections; it is practically always caused by infection. If a great number are destroyed the load of the kidneys must be carried by the remaining units; this condition predisposes to a subsequent kidney breakdown. The signs of this type are characteristic; the heightened blood pressure, many R. B. C., often hematuria, many casts, and abundance of albumin in a patient who has evidence of infection make a definite picture of acute glomerulo nephritis. This inflammation may heal up and the kidney may go along functioning normally for years; then a repetition of the infection occurs, which again disables many more glomeruli; these recurrences of attacks at last disable so much of the renal parenchyma that less than a sufficient number of functioning units are left to do the work of the kidneys. The patient is now called a chronic glomerular nephritic with acute exacerbation and kidney insufficiency. He generally is 40 or below in age. The condition of this patient would be classed as chronic interstitial nephritis under the old classification. There are, I believe, many cases of nephritis that show at times slight involvement of the glomeruli distinguished by some albumin, few R. B. C., slight elevation of B. P. (138-140 and 90). These patients frequently are young people who generally have diseased tonsils or some other foci of infection, the removal of which may remedy the condition.

The chronic tubular nephritis may follow the acute attack; it goes under different names such as nephrosis and chronic parenchymatous nephritis. Low blood pressure, abundance of albumin, few blood cells and casts and oedema are its diagnostic features.

Chronic glomorulo nephritis follows repeated attacks of acute glomerulo nephritis as previously stated. It is characterized by high blood pressure which sets this disease apart from tubular nephritis. This class of cases was put by some in with parenchymatous because of the oedema, and with the interstitial by some because of high blood pressure.

The next variety to which I wish to refer is the arteriosclerotic nephritis. Many, I know, object to this term, because they feel that the arteriosclerosis associated with the kidney disease is not of an inflammatory nature. The term is, I believe, justifiable at present because many eminent authorities believe that the arteriolar sclerosis which distinguishes this type of kidney is the result of an inflammatory process. This disease is said by certain writers to begin as essential hypertension; later diffuse hyperplastic arteriosclerosis develops which involves the arterioles and their parent arteries in the kidney. The result is that the functioning kidney tissue becomes deprived of blood due to fibrosis; a primary contracted kidney develops and later signs of renal failure come on. The patient with this disease is generally aged 50 or over and has had high tension without albumin for years; the heart is seen to be greatly enlarged; this is the type of case in which the heart breaks down, and the condition known as cardio-renal disease presents itself. This type of case is often classed as interstitial nephritis. The term interstitial seems applicable when one does not know whether the condition came on following repeated infections or arteriosclerosis. It is a correct term to use, when one wishes to indicate that knowledge is lacking of the past events in the case.

DIAGNOSIS

The diagnosis of nephritis, in its broad sense, is not always easy. It would be easy if all one had to do was to inject something into the patient and then collect the blood or urine or both and see how much of the substance injected was present; many seem to feel that these laboratory tests do give up the secrets of the inner workings of the organs; they do not however tell the whole story. The clinical signs and symptoms plus the general condition of the patient, particularly the condition of the heart and gastro-intestinal tract, are very important in forming a medical opinion in cases of nephritis. Extra renal factors, the condition of the blood, and that force of the human body known as resistance are so closely bound up with the kidney that one cannot measure the kidney activity accurately by any examination which takes into consideration only the renal structures themselves. That is why clinical observation means a great deal in diagnosis of nephritis. The most delicate test known for nephritis is albumin and casts in the urine. These may be due to other things but generally mean renal disease. The question of impaired renal function is another story. It seems that many patients have a slight amount of albumin in the urine and are considered not nephritic because no signs of kidney inability are present. When albumin is found the delicate tests for insufficiency of the kidney should be done and the patient should be kept under observation for some time in order to determine whether or not there is an organic lesion and to decide whether, if present, it is progressive. The tests for kidney insufficiency are important measures to be used in conjunction with clinical observation; they are, however, worth more for prognosis than for diagnosis and treatment. The following function tests are, for the most part, simple and throw a good deal of light on what the kidneys are doing. Most of them can be performed by any doctor in the home, the office, or hospital. The chief tests are:

1. Phenolsulphonephthalein test.
2. Blood chemistry.
3. Comparisons of fluid intake and output.
4. Two hour concentration test.
5. Urea concentration test.

The phenolsulphonephthalein is commonly used and I believe all know its application and interpretation. The blood chemistry test of course means that a good laboratory must be at hand so that non-protein nitrogen, urea nitrogen, uric acid and creatinin determinations can be made.

The quantity of urea nitrogen in the blood seems to give more reliable information concerning kidney function than the other chemical tests. The normal variations range from 25 to 40 mg. per 100 c.c.

The intake and output of fluid is a very simple and valuable test of kidney function. It consists merely of

measuring the intake of fluid and the output of urine. The output should almost equal the intake; about 200-300 c.c. difference in favor of the intake is normal. The ability of the kidney to handle water tells a very important story of kidney function.

The two hour concentration test is also simple when applied in the following manner: The patient is put on a regular diet; there are no restrictions; 3 square meals a day are given, no fluid and no food are taken between meals. The urine is collected separately at 8 A. M., 10 A. M., Noon, 2 P. M., and 6 P. M., the night specimen is collected and measured separately. The specific gravity of the different specimens during the day is taken; the variation should amount to 10 points; the high figures follow ingestion of food; this procedure tests the ability of the kidneys to concentrate and depends on the amount of functioning renal tissue.

The urea concentration test is not used in this country as much as in England, where MacLean applied it to 10,000 nephritics and feels that it is of great value. The technic of the procedure described here is that recommended by MacLean.[7] Fifteen gms. of urea are given at 8:00 A. M., at 9 A. M. the first urine is collected and discarded; at 10 A. M. the second urine is collected and analyzed for urea. Less than 2 gms. of urea per 100 c.c. of urine means poor kidney functions; normal kidneys are capable of concentrating urea 70 times, or more, its concentration in the blood. Thus if a sample of blood is found to contain 20 mgms. of urea per 100 c.c., and the urine at the same hour as the blood was drawn shows a concentration of 1,400 mgs. per 100 c.c. (114 per cent), it is obvious that blood urea as it appears in urine has been concentrated 70 times. This number represented by

$$\frac{\text{milligrams urea per 100 c.c. urine}}{\text{milligrams urea per 100 c.c. blood}}$$

may be as low as 10 in nephritics. This number is referred to as the "urea concentration factor." The urea concentration test and factor give very valuable information when carried out properly. Any of these tests alone may render erroneous information; but several of them plus clinical study are valuable in passing an *opinion* on the status of the kidney.

MANAGEMENT OF NEPHRITICS

When we begin now to analyze our methods for treating nephritis we at once see that we must aim to treat, first, the nephritis itself, second, to treat renal failure, if present. The treatment of nephritis consists in removing foci of infection such as infected tonsils or teeth if they can reasonably be blamed for the nephritis; also one must aim to build up the patient by hygienic living so that the progress of the nephritis will be curtailed, in other words, to raise the resistance of the patient, and to protect the patient from infections such as scarlet fever, measles and other infectious diseases.

The kidney insufficiency characterized by oedema, headache, nocturia, oliguria, malaise is the condition in which the patient and the physician are most interested.

The management of acute nephritis is about the same whether one has a glomerulo or a tubular to deal with; the distinguishing feature of glomerulo is the heightened B. P., otherwise both of these have a characteristic pallor, puffiness of the face, and some oedema of the ankles. Often headache, furred tongue, chills, nausea, and lumbar pain are present. The urine is generally scanty and is of a dark mahogany color in the glomerulo type. Uremia often comes in the course of this stage. What methods are employed in treating these cases? They are:

1. Active elimination by bowels to secure rest to the kidney. Bowel activity is secured by a saline cathartic such as magnesium sulphate, two or three ounces of the saturated solution in the morning; or by giving 30-60 grs. of compound jalap powder in water, every day.

2. The fluid intake is limited to about 800-1,000 c.c. a day; milk alone, or milk plus lemonade or Imperial drink are very satisfactory. Imperial drink is made by adding one dram of cream of tartar to one pint of lemonade; this is an excellent measure in treating acute nephritis. The output should be carefully measured.

3. The diet for the first 7 or 8 days should be restrained to the use of those fluids mentioned above. Salt should be carefully avoided.

4. The patient should be kept warm preferably in a sweat for most of the time during the day; a hot pack is good providing the patient is in a hospital.

5. Diuretics are not indicated in acute nephritis.

6. Alkalinization may be carried on by adding potassium citrate gr. fifteen to the lemonade or giving it in plain water three times a day.

7. The idea that one can flush out the kidneys with large quantities of fluid has not been practical in most cases; the limitation of fluids gives best results.

The management of chronic nephritis depends somewhat on the severity of the renal insufficiency; some patients are not sick enough to quit work, in which case, the diet sheet which limits the protein and salt of the diet is applicable. Many types of diet sheets for nephritics are used, but the one recommended by Dr. O'Hare which will be described later, has met with the approval of a great many physicians.

The care of the patient with more marked kidney failure is begun by:

1. Restricting the patient's activity to the bed or to an arm chair with bath room privileges; this lessens the metabolism and therefore relieves the load on the kidney, whose function it is to excrete by-products of metabolism.

2. The salt should be restricted; this is done by taking away salt shakers, and by withholding the addition of salt during preparation of foods.

3. Fluids are restricted to 1,000 c.c. a day.

4. The diet—the best results are obtained by starting the patient on a modified Karrell diet as outlined below:

KARRELL DIET

A. 1st to 4th day inclusive

Time	
8:00 A. M.	200 cc. of milk.
12:00 M.	200 cc. of milk.
4:00 P. M.	200 cc. of milk.
8:00 P. M.	200 cc. of milk.
Total	800 cc. of milk.

(P. 24—F. 32—C. H. 40—Cal. 544)

B. 5th and 6th day

Time	
	800 cc. of milk as above, plus
10:00 A. M.	1 egg
6:00 P. M.	2 slices of bread

(P. 37—F. 40—C. H. 82—Cal. 836)

C. 7th and 8th day

Time	
	800 cc. of milk as above
	No breakfast
12:00 M.	1 slice (50 gms.) Beef.
	1 large (200 gms.) Potato
	10% vegetable (100 gms.) or ½ cup
6:00 P. M.	1 egg, Butter (15 gms.) or 1½ squares

(P. 47 — F. 54 — C. H. 86 — Cal. 1024)

D. 9th day. 800 cc. of milk discontinued.

Breakfast	Dinner	Supper
Bread—1 slice	Beef roast—1 slice	Beef roast—1 slice
Butter—1 square	Gravy—⅛ cup	Potato—1 large
Orange—1 large or Grapefruit—one-half	Potato—1 large	Vegetable (5%)—8 tablespoons
Oatmeal—¾ cup	Vegetable—(5%), 8 tablespoons	Orange—1 large
Sugar—2 tablespoons	Orange—1 large	Bread—1 slice
Milk—¾ cup	Milk—½ cup	Milk—¾ cup
	Sugar—½ tablespoon	Sugar—1 tablespoon
	Bread—1 slice	Butter—2 squares
	Butter—2 squares	Mayonnaise—1 tablespoon

(P. 52 — F. 85 — C. H. 269 — Cal. 2057)

This course of treatment (Karrell diet) has several advantages. They are: (a) It is simple and can be carried out in any household; (b) it limits fluid; (c) it limits protein; (d) it limits salt; (e) it is a measured diet from which output can be determined and compared with intake.

Following the ten days of Karrell diet, if the patient has progressed satisfactorily he is given the O'Hare diet sheet which allows 40-50 gms. of protein a day. This method of dieting has become very popular among physicians because of its simplicity and the beneficial results derived from it. The diet sheet of Dr. O'Hare is as follows:

Any combination of the foods designated below may be selected.

Foods not listed below must not be taken.

In groups 1 and 2 there is restriction in total amount. The foods in these groups must be served in full or half portions.

A full portion in group 1 counts one (one is equivalent to approximately 4 grams of protein).

A full portion in group 2 counts two.

In group 3 the quantity of each is not restricted, although you are urged to use discretion.

Your total score for the day should be.....

Your total amount of fluid should be.....pints.

Do not add salt or spices to the food after it has been cooked.

GROUP 1

Each full portion equals 1 count

	Full Portion
Bread (white)	1 average slice
Bread (graham)	1 average slice
Uneeda biscuit	5 crackers
Shredded wheat	1 biscuit
Graham crackers	5 crackers
Cereals, etc.	
Oatmeal	2 tablespoons
Boiled rice	3 tablespoons
Cornmeal mush	4 tablespoons
Cream of wheat	6 tablespoons
Farina	6 tablespoons
Macaroni	4½ tablespoons
Vegetables, etc.	**Full Portion**
Baked beans	1 tablespoon
Lima beans	1½ tablespoons
Potato (mashed)	1½ tablespoons
Potato (creamed)	1 tablespoon
Potato (baked)	1½ med.
Potato (boiled)	1½ med.
Canned corn	2½ tablespoons
Green peas	2 tablespoons
Spinach	4 tablespoons
Beets	5 tablespoons
Bananas	2 large
Cream (heavy)	⅔ cup

GROUP 2

Each full portion equal 2 counts

	Full Portion
Milk	1 glass
Egg	1 egg
Eggs (scrambled)	1½ tablespoons
Flour (sifted)	⅔ tablespoon
Meats	
Lamb chops (boiled)	⅔ chops
Lamb roast	3" x 2½" x ¼"
Beef roast	3" x 2 " x ¼"
Beefsteak (broiled)	2" x 1 " x 1 "
Chicken (roast)	3" x 3 " x ⅛"
Fish	**Full Portion**
Cod (boiled)	1 " x 1" x 1½"
Haddock (boiled)	1 " x 1" x 1½"
Halibut (boiled)	1 " x 1" x 1½"
Mackerel (boiled)	1 " x 1" x 1½"
Salmon (boiled)	1 " x 1" x 1½"
Smelt	½" x 1" x 3"
Oysters	7 oysters
Crabmeat (canned)	2 tablespoons
Salmon (canned)	1½ tablespoons
Shrimp (canned)	6 small

GROUP 3

Vegetables	Fruit
Asparagus	Apple
Cabbage	Pineapple
Carrots	Blueberries
Cauliflower	Cherries
Celery	Cranberries
Cucumbers	Raspberries
Lettuce	Strawberries
Mushrooms	Muskmelon
String-beans	Lemons
Tomato (fresh)	
Tomato (cooked)	
Onions	
Squash	
Turnips	

Fruit	Miscellaneous
Prunes	Sugar
Grapefruit	Maple sugar
Grapes	Syrup
Watermelon	Honey
Pears	Candy
Apricot	4 dates per day
Plums	3 Sunshine arrowroot cookies per day
Orange	Cornstarch
Peaches	Arrowroot
	Tapioca
	Post-Toasties
	Butter
	Olive oil

The patient is directed to take let us say 12 counts a day. He is told to take these from group 1 and 2, then to construct the remainder of the diet from group 3 which contains practically protein free articles. The amount of fluid to be taken a day is pointed out by the physician. This method of handling a nephritic gives the patient a definite idea how to proceed and brings satisfaction to the patient and his doctor.

The question of the protein or meat in the diet seems important enough to halt for a moment and consider it. It is well known that the patient is often told to stop eating meat, eggs, and milk. Some patients

take this advice with a grain of salt and eat meat and eggs and drink milk off and on; there are others who take the doctor at his word and actually stop these foods. Providing that this restriction is adhered to for a short time, let us say three weeks, there is no doubt that beneficial results are attained; but if carried out over a period of months deleterious effect may ensue. A certain amount of protein is necessary to the body every day; if this is not furnished by food the protein of the body is used up; this state of affairs may weaken the body and lower the resistance, a state of affairs to be avoided. About 40 gms. of protein a day are considered enough to maintain nitrogen equilibrium. This has no application, in treating acute nephritics, and during the first three weeks in treating chronic nephritics.

Diuretics such as diuretin gr. xv three times a day for several days do good, if the kidney function is not extremely low; they are especially indicated when cardio-renal disease is present.

Bashams mixture is practically always given to nephritics because it contains iron and is a mild alkali; the fact that practically all nephritics are anemic probably is the reason why Basham's works so well. Tincture of digitalis in tonic doses; one c.c. three times a day is an excellent drug to use and seems to give very satisfactory results. Calcium chloride has been used in the treatment of nephritis with oedema but does not give good results.

Those cases of chronic glomerulo nephritis called the interstitial type by some, are treated by venesection if signs of uremia begin. Venesection is very simple and efficacious if performed in the following manner: A tourniquet is applied to the arm above the elbow and tightened sufficiently to stop venous flow, but not tight enough to stop arterial flow; then place a Wasserman needle of large caliber with attached syringe into a vein at the elbow; when the blood comes one can determine if the flow will be satisfactory, if so remove the syringe from the collar of the needle and place a pus basin under the flow from the needle. When finished just remove the tourniquet and withdraw the needle.

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[2]Quoted from Oertel, Horst: The Anatomic Histologic Processes of Brights Disease, Philadelphia, W. B. Saunders Co., 1910.
[3]Cushny, A. R.: The Secretion of The Urine, London, Longmans, Green and Co., 1917.
[4]Richards, A. N.: The Harvey Lectures, Philadelphia, J. B. Lippincott Co., 1920-21. P. 163.
[5]Pepper, O. H.: Ill. Med Jour. XLV: 93. (February), 1924.
[6]Stengel, Alfred: The Classification of Nephritis and The Relation of Infection to Kidney Disease, Med. Clin., N. Amer., 1:217 (Sept.), 1917.
[7]Maclean, Hugh: Modern Methods in the Diagnosis and Treatment of Renal Diseases, Philadelphia, Lea and Febiger, 1924.

X-Ray Technique

Eighth of a Series of Illustrated Articles by James F. Kelly, M.D., Assistant Professor of Radiology and Physiotherapy, Creighton University, Omaha, Nebr.

X-RAY EXAMINATION OF THE SPINE

LAST month's article described the features of anatomy of the spine which should be kept in mind by the staff doctor when ordering an x-ray examination and should be understood by the technician. With these features in mind we may now consider the radiological examination.

History

Just a short time ago, it was almost absolutely necessary in making an x-ray examination of the spine to use a short distance with compression and be satisfied with but a very small number of vertebrae on each film, four being considered as many as could be rayed without fatal loss of detail from distortion due to overlapping and from blurring due to secondary radiation. However, when Dr. Hollis Potter of Chicago improved the Bucky diaphragm to its present practical state, he made it possible for us to take pictures of spines at a distance of even thirty inches. At this increased distance in a stereoscopic Bucky set of films shifting parallel to the long axis of the column, we have but little distortion and even more clearness than did our small carefully centered plate of former years. To view stereoscopically ten or twelve or more vertebrae at one time is an added advantage to the diagnostician. He is able to see areas of scoliosis, a comparative depth of the intervertebral spaces, the position of the processes in relation to the various articulations, etc., over a much greater area and consequently as he is able to see more, sooner or later he should know more. Fig.

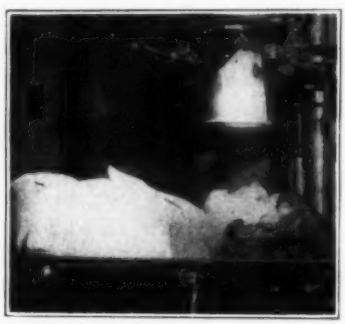

FIG. 60.

Posture for antero-posterior view of upper two cervical vertebrae through the open mouth. The teeth and mandible anteriorly and the occipital bone posteriorly make it necessary that the upper two cervical be taken through the open mouth.

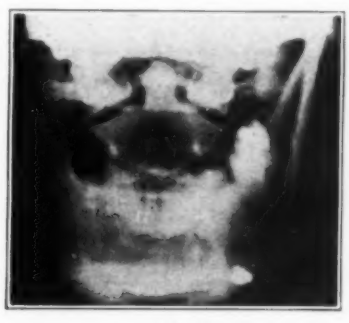

FIG. 60a.

X-ray picture resulting from exposure as illustrated in Fig. 60.

FIG. 60b.

Posture of skeleton. In this figure due to the fixed extended position of the skull, it is necessary to tilt the tube toward the feet about five degrees which shoots the vertical ray parallel to the base of the skull.

FIG. 61.
Posture for antero-posterior view of the lower group (lower five) of the cervical vertebrae.

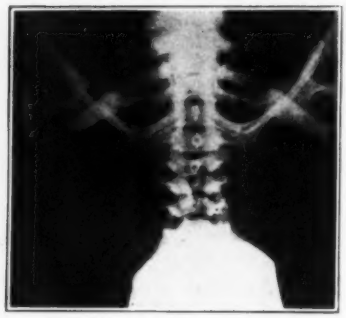

FIG. 61a.
X-ray film resulting from exposure as illustrated in Fig. 61.

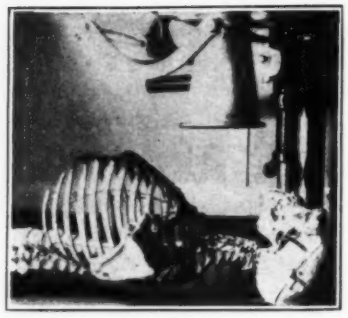

FIG. 61b.
Posture of skeleton corresponding with Fig. 61.

67a is an x-ray reduction of a Bucky film of the dorsal and lumbar area in the antero-posterior position on a single film. Fig. 67 is posture for same.

For very evident reasons, it is necessary to add to the usual antero-posterior view, a lateral or an oblique view in order that the outline of all the bodies may be more distinctly viewed. Fig. 66a and Fig. 62a are lateral views of normal spines and Fig. 62b is a lateral view of a diseased spine, the latter view showing destruction of the bodies and loss of interspaces. This lateral or oblique view is particularly necessary when looking for tuberculosis or when x-raying a spine which has suffered from a compression fracture of one of the bodies. In fact, it is not safe to say that a spine or one suspected of tuberculosis in the spine, is properly x-rayed if the lateral or oblique view is omitted. A small area of destruction of the body or an early localized loss of lime salts, etc., is much more apparent on the lateral or oblique view than on the antero-posterior view. In fact, what will show very plainly on the oblique or lateral may be entirely overlooked even in good films taken stereoscopically in the antero-posterior position. I do not believe one is justified in giving a negative report in such cases unless a satisfactory lateral or oblique throughout the suspected area has been viewed.

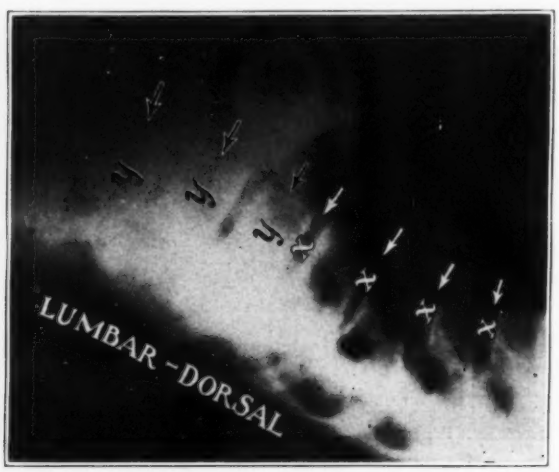

Fig. 66a. X-ray film resulting from exposure in posture illustrated in Fig. 66. The white area marked "Y" indicates the body of the vertebra and the dark area marked "X" indicates the intervertebral disc or space. See Fig. 55 for further explanation.

A satisfactory lateral or oblique is frequently difficult but rarely impossible to obtain.

Essential Views

The usual routine view of any part of the spine should be, an antero-posterior stereoscopic set of 14x17 films (see Fig. 67a) or at least 11x14 films shifting the tube parallel to the long axis of the spine and then at least one 11x14 lateral or oblique through the suspected area. See Fig. 66a for a lateral view showing bodies and intervertebral discs.

ESSENTIAL VIEWS OF THE DIFFERENT AREAS

I. X-Ray Examination of the Cervical Vertebrae

Because of the difficulty in getting all of the cervical vertebrae on one exposure in the antero-posterior or the postero-anterior position, it is advisable when one of these views is desired to divide the cervicals into an upper and lower group, the upper group consisting of the first and second, and the lower group consisting of the lower five vertebrae. Anteriorly, the mandible and teeth and posteriorly, the base of the skull interfere with the projection of the shadow of the upper two or three vertebrae on the ordinary antero-posterior view, while the lower five vertebrae of this area are easy to obtain. For the upper group (the 1st and 2nd vertebrae) it is necessary to shoot through the open mouth as illustrated in Fig. 60. Unless the neck is fixed in an angled position by muscle spasm or by some other means no tilt of tube is required. See Fig. 60a for x-ray reduction and Fig. 60b for view of dry skeleton. To obtain a view of the lower five cervicals which comprise the lower group in the antero-posterior position, the mouth is closed, chin is slightly extended, and tube is tilted about three to five degrees upward. The upper two or three thoracic vertebrae should also be demonstrated on this film. Stereoscopic films (size 8x10) shifting parallel to the long axis of the spine, with the upper border of the cassette touching the base of the skull and the tube centered about over the fifth cervical vertebrae, and the vertical ray striking the plate almost at right angles to the film will be found very satisfactory for this area. See Fig. 61 for posture and Fig. 61a for x-ray reduction and Fig. 61b for the dry skeleton.

Laterally, for this area, it is possible in the average case to obtain, on a single picture, the entire seven

FIG. 62.

Posture for lateral cervical vertebrae. This illustration is used to show the essential features of this technic. A rubber ball is placed on each side of the neck and compressed by means of the wide linen band on the Bucky Diaphragm and stereoscopic pictures are made while the patient holds her breath. Allow patient to breathe between pictures. Shift parallel to the long axis of the spine and use the Bucky diaphragm, which is not done in this illustration.

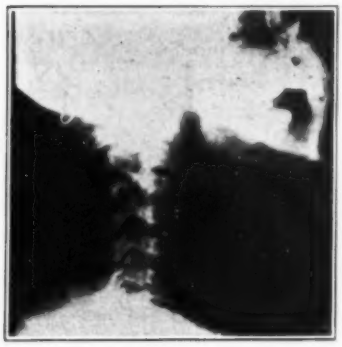

FIG. 62a.

X-ray film resulting from exposure as described under Fig. 62.

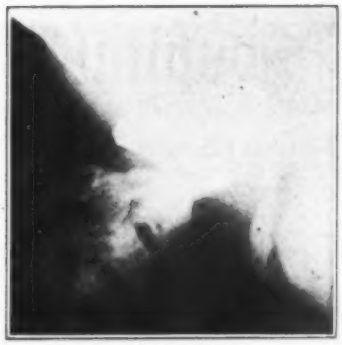

FIG. 62b.

Lateral cervical vertebrae showing destruction of the bodies of the fourth and fifth vertebrae and their interspaces.

FIG. 66.

Posture for lateral view through the mid-thoracic area. Due to the fact that the vertebrae are considerable distance from the film it is essential that no breathing take place while the exposure is being made. By placing the rubber ball lower over the lumbar spine a good lateral in this area is easy to obtain. In this view there has been a double exposure of the tube and carrier to show the direction of the stereoscopic shift.

FIG. 67.

Posture for entire dorsal spine using compression and distance. Target film distance and compression obtained by means of the wide linen band and rubber ball as illustrated. This view shows the lower focus of the stereoscopic films.

FIG. 67a.

X-ray film resulting from exposure as illustrated in Fig. 67. When several vertebrae are demonstrated on one film it is very easy to compare densities and other essential diagnostic data. When the clinician is unable to specify definitely just the area he wishes these large films showing several vertebrae should be taken.

cervical vertebrae. No attention to the upper and lower groupings is required for lateral views. These should be taken stereoscopically shifting parallel to the long axis of the spine. See Fig. 62 for posture and Fig. 62a for a lateral of the normal in this area and Fig. 62b for a pathological picture of the same area.

Occasionally, on a short necked, thick chested individual, it is impossible to obtain a lateral of the 6th and 7th cervicals and one must be content with an oblique postero-anterior showing the lower cervicals and upper three or four dorsals. Deformed or diseased individuals may present other difficulties to the technician. Because of the narrow bodies and the numerous close set articulations, it is necessary to take stereoscopic views, shifting according to the needs of the case. In most cases, stereoscopic films shifting parallel to the long axis of the spinal column make very good films of this area.

The Church Unity Octave in 1926

AN appeal has come to HOSPITAL PROGRESS to remind all our hospitals and hospital workers to join in the Church Unity Octave which will be observed once more this year throughout the Catholic World. Over two hundred Cardinals, Archbishops, Bishops, and Vicars-Apostolic, from every part of the globe have asked the Holy Father to decree the devotions of the octave, as they have the devotions to the Blessed Virgin during May and October.

Pope Benedict XV of holy memory granted an indulgence of two hundred days each day, and a plenary indulgence under the usual conditions, for those who recite the appointed prayers each day. These prayers or devotions can be obtained from the central office of the Church Unity Octave, at Graymoor, Garrison, New York. The price of ten copies is twenty-five cents, of a hundred copies, one dollar.

This is a very providential time for praying for church unity. The Protestant sects are praying and working for unity, world conferences are being held to try to secure it, the Holy Father yearns to see the Orthodox churches of the East, restored to Catholic unity, and thus the Church Unity Octave is the expression of a world-wide desire, that the prayer of Christ may be accomplished. We know that this can only be done by the return of the wandered children of the Church to the true fold, "That they may be all one, as Thou, Father, art in Me, and I in Thee; that they may be also one in Us, that the world may believe that Thou hast sent Me."

Hospital Progress

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A New Years Greeting

Most happy may the New Year be,
With cheer and toil and Charity!
May Christ's dear kindness wrap us round,
His peace within our hearts be found,
Where'er this year we may abide,
May Christ walk ever at our side,
His eyes be on us all the while,
His Face from every pillow smile!

—Edward F. Garesché, S. J.

BON VOYAGE

Dr. Malcolm T. MacEachern, the director of hospital activities of the American College of Surgeons, has sailed for New Zealand. The British Medical Association, with the support of the government, has invited Dr. MacEachern to inspect the hospitals of New Zealand, and bring to bear upon their local problems the experience of the standardization program of the American College of Surgeons. New Zealand ought to profit greatly from the College of Surgeons' program, because it is a practicable one, administered intelligently not for the purpose of merely classifying the hospital, but of improving it progressively for the interest of the patient. It has been made in a very real sense an educational and stimulating program. The hospitals of New Zealand cannot but profit by its immediate experience and the adoption ultimately of the complete program.

To Dr. MacEachern, Ambassador Plenipotentiary from the American Hospital to the New Zealand Hospital (and let it be added parenthetically, a type of ambassador of service and good will of which there ought to be many more) we wish "Bon Voyage."

Godspeed!

—E. A. F.

SPECIAL EDUCATIONAL NUMBER

In view of the special interest felt by all the members of the Catholic Hospital Association in the proposed program for the grading of schools of nursing, and the general interest which attaches to hospital education at the present time, we have thought it well to prepare a special issue of Hospital Progress to deal with these special subjects. This educational issue will be made ready as soon as possible, and will contain articles by experts on various phases of hospital education. We shall be very glad to have specific suggestions from our readers concerning topics and questions which they would like to see treated in this issue. These suggestions should be sent to the headquarters of Hospital Progress so that they may be considered in the preparation of this issue.

While most of the issues of Hospital Progress contain material distributed among the various departments of hospital activity, the issuance of special numbers from time to time seems to find favor with our readers and we shall be glad to receive messages as to what particular special numbers you would most like to see, and would most profit by.—E. F. G.

THIS MONTH'S TABLE OF CONTENTS

Two notable articles stand out in our January issue, both of which deserve careful consideration on the part of hospital readers. The one, is Dr. McEachern's thoughtful article on the results of his observations and experiences of the problems of hospital workers, read at the Maritime Conference of the Catholic Hospital Association at Halifax, Nova Scotia. The other is the article of E. H. Lewinski-Corwin, read before the meeting of the American Hospital Association at Louisville. Both of these papers bring to our readers a great deal of valuable suggestion and the result of much experience and observation in hospital affairs. Both will repay a rereading by those who are responsible for hospital welfare.

The other articles cover a wide range of Hospital interests. Physiotherapy, School Nursing, another of Dr. Kelly's valuable articles on X-Ray Technique, items and news of interest from many hospitals throughout the country; all these with the other articles make up an appetizing intellectual repast. Where the busy hospital Sisters can not find time to read individually all they would like, we suggest that at least some of the more inspirational articles be read in the refectory. Then, too, the bound volumes should be kept on hand, for convenient reference. Most of the material published in Hospital Progress is of permanent value and forms a constant store-house of inspiration and information to hospital workers.—E. F. G.

HOSPITAL PUBLICITY

It is quite surprising how little even otherwise well informed people know about the Catholic hospitals or how little even Catholics realize the work they are doing or the service they are rendering to the Church and to society at large. The injunction, "Let your light shine before men," seems to be rather grievously neglected by our hospitals as a whole, and this is the greater misfortune because the works of the hospitals in the United States and Canada would, if thoroughly well known, accomplish the purpose of our Lord's injunction when He says, "That seeing your good works they may glorify your Father Who is in Heaven."

Not only our individual hospitals, but the hospital system as a whole should be made better known. Our hospitals are in the truest sense institutions for public service, and it is to the interest of the entire public to know what they are and what they are doing. It is to the interest of our hospitals as well for they often need to appeal to the public for aid in building or in paying debts, and it helps immensely on such occasions if the public is already well informed and consequently well disposed concerning the work of the hospitals.

Publicity has in our times become almost a fine art, and it can be had by definite procedures. The Catholic Hospital Association, if properly seconded by the individual hospitals who are its members, could well undertake a campaign of general publicity. It could publish interesting and attractive leaflets and booklets in which the general advantages of service might be set forth. These booklets might be taken in quantities by the individual hospitals and they could have inserted in them some special pages descriptive of their own institution.

So as far as local publicity is concerned, some one connected with the hospital should be named and charged with the work of publicity for the institution. The local papers will be glad to publish interesting items submitted to them about the hospital, its activities, its personnel.—E. F. G.

TENURE OF LIFE AND LEISURE

The recent totally unexpected death of a beloved confrere at the age of forty-three brings to the writer much poignant reflection. This friend died of angina pectoris in his second severe seizure. There was a thrombus in one coronary, producing the customary infarction. This latter catastrophe was hastened by an acute upper respiratory infection, which received from the patient the same attention a doctor usually gives these affairs—a friendly neglect.

This doctor lived the very intensive life presently so very characteristic of the active men in our profession. We are told to study the "wood in our family tree," if we are to understand longevity and vital capacity. On that basis, he should have had a reasonably long life expectancy, for his parents are still living and well in their seventh decade.

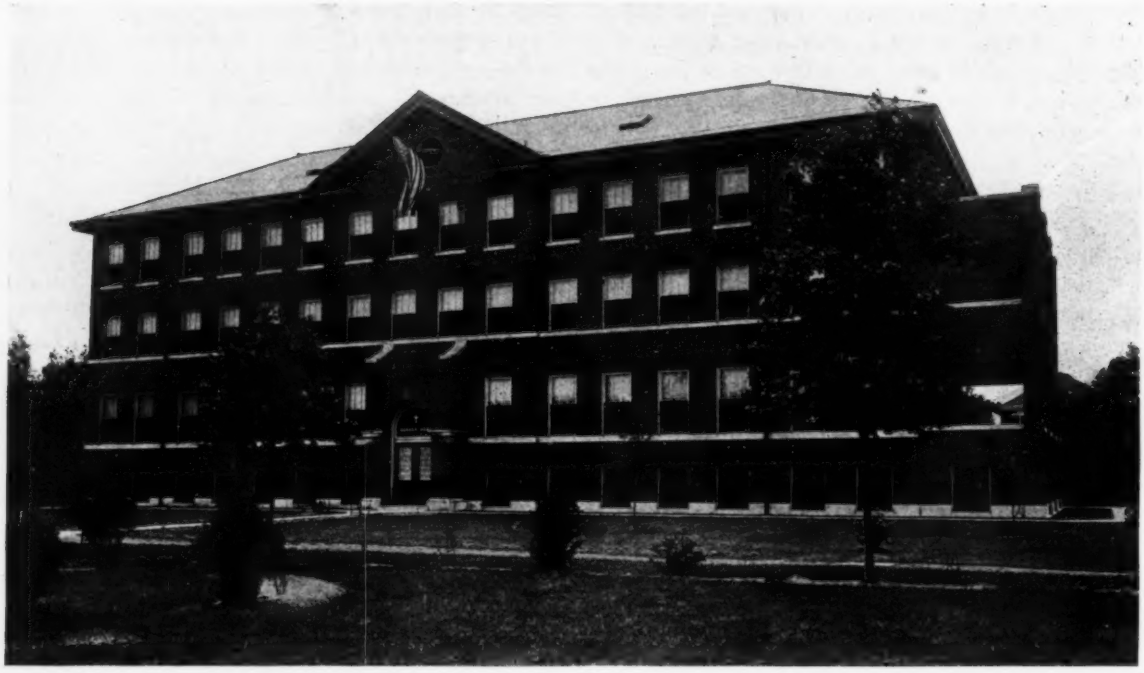
We are prone to assume that accidental death is always external and violent. A little thought, however, easily convinces us that it may be decidedly internal and stealthy. He showed at autopsy, for example, almost no arteriosclerosis anywhere else except in the coronary arteries, and a very trifling amount at the base of the aorta. Had infinitely greater atheroma developed in his peripheral vessels, or almost anywhere else in the body, the result would not have been lethal, and could have been symptomless. Thus, in the present state of our knowledge, whatever ultimately may prove to be the determinants that select the areas for early arteriosclerosis, it is seen that the end results are "accidental;" this implantation, where the pathology induced is as deadly as would be a bullet discharged into the same area from a revolver, is as fatal as it is tragic. The reverse of this, where accidents save life, can easily be conjectured: an unoperated duodenal perforation, where a kindly portion of omentum cements off the opening, comes to mind.

At the same time, we do not need to make these philosophical peregrinations to find "accidents" in the present vogue of the automobile, and this leads us to an analysis of the subject of leisure.

Any man who has served his community and his profession long and toilsomely, deserves something over and above an honorable death and a sumptuous funeral. Every age fancies itself so much more intensive and occupied than its predecessor. Discounting the presumption freely, it is apparent that this is a very active age. As automobiles have been improved and wonderful roads extended, everyone (including the doctor) has covered more ground. On the whole, however, we may say that the cruising radius has simply been enlarged, and as yet, the mental or inward horizon is unchanged.

Angina pectoris is said to be a doctors' disease. Why? This is most difficult to answer, but, when the factors of confinement, diet, irregularities of work, recreation and exercise, are all tabulated, the endocrine influence of worry will stand out conspicuously. It is not that doctors, as a whole, worry much about themselves, or have a particular fear of fatal issue in their own illnesses. The contact they have with their patients is apt to be a "nagging" one, with much uncertainty, and often tribulation. The inherent tendency of mankind to complain—the relatives who want to show an interest in the patient by bantering his doctor —the inevitable incompleteness of our knowledge and the science of medicine—the obvious fact that sooner or later, no matter what is done, we all must die—these are the things that sometimes literally "eat the heart" out of conscientious doctors.

This situation we cannot run away from, nor should we suppose that all walks of life have not also their own tribulations. It is said that it will require three generations of leisure to enable the remaining scion to wear a top hat unconsciously. Leisure is on the way, with the multitude of time saving conveniences, which, coupled with energy, foresight, and thrift, should give people more time to live. Now, this living business, and the mastering of its technique, is not going to be easy. "Where do we go from here?" is the slogan for those who have no peace or happiness from within themselves. In planning for that rest and leisure so alluring in the distance, we could all do few things of more value than to cultivate useful, quiet, and harmonious hobbies—and, yes, cultivate an acquaintance with Saint Thomas Aquinas.—E. L. T.



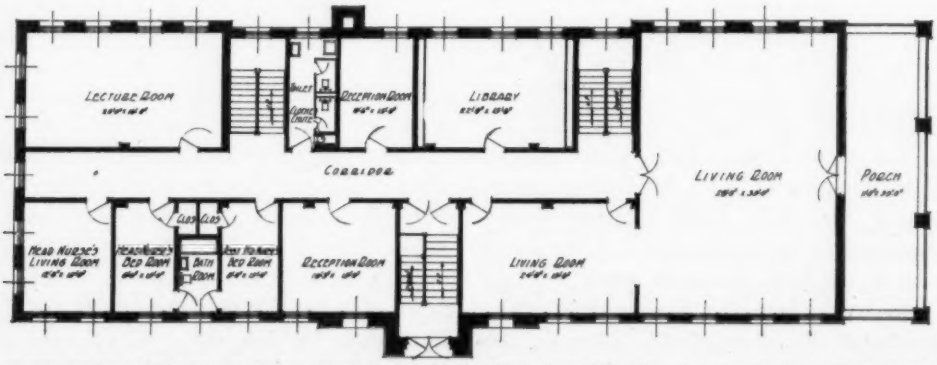
NURSES' HOME, ST. MARY'S MERCY HOSPITAL, GARY, IND. Hermann J. Gaul, Architect, Chicago, Ill.

Mercy Grows Up With Gary

The history of St. Mary's Mercy Hospital is closely linked with Gary, the city of magic and wonder, which has grown out of a desert of sand-dunes over night into schools, churches, and homes. Beginning with a population of "one" in 1906, it mounted to a hundred thousand in less than eighteen years. The reason of the rapid growth of Gary, Indiana, is not at all a secret, for the world at large has knowledge of the gigantic steel mills that line the shore of Lake Michigan and rear their flaming chimneys against its horizon. Yes, Gary is today the greatest steel center in the world.

To this city of many nationalities and three score or more of tongues, when hardly a year of its history had gone its rounds, came, in November of the year 1907, the Franciscan Sisters of Burlington, Iowa. The struggles and hardships of these kind Sisters who, full of hopes and high ideals, came to relieve the sufferings of humanity, must have been numerous. The Illinois Steel Corporation donated a site on Tyler Street between Fifth and Sixth Avenues, nine blocks west of Broadway, on which these Sisters in 1912 began the erection of the present institution, but through lack of funds were forced to discontinue the work.

In 1913, through the Right Reverend Bishop Alerding of Fort Wayne, Indiana, the Poor Handmaids of Jesus Christ, the Sisterhood now in charge, took over the hospital in Gary. The first of these Sisters arrived on November 17, 1913, and were taken to old Mercy on Carolina and Seventh Avenues, east of Broadway. Here they found four private dwellings connected by hallways, thus making it possible to get to and from these dwellings without exposure to inclement weather. The houses were lettered A, B, C, and D. The first of the group was house D, which provided the office, classroom, and superintendent's and chaplain's rooms. House C was given entirely to patients. The same was true of houses A and B, with the exception of a small operating and sterilizing room in house A. The kitchen, the Sisters' refectory and nurses' dining room were portable shacks constructed of tar and paper. Here our good Sisters struggled bravely with all manner of difficulties while waiting for the new building to be completed.



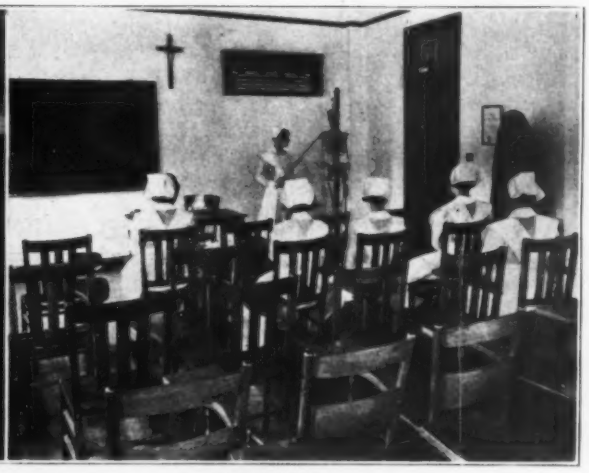
FIRST FLOOR PLAN, NURSES' HOME, ST. MARY'S MERCY HOSPITAL, GARY, IND. Hermann J. Gaul, Architect, Chicago, Ill.

Bed Room

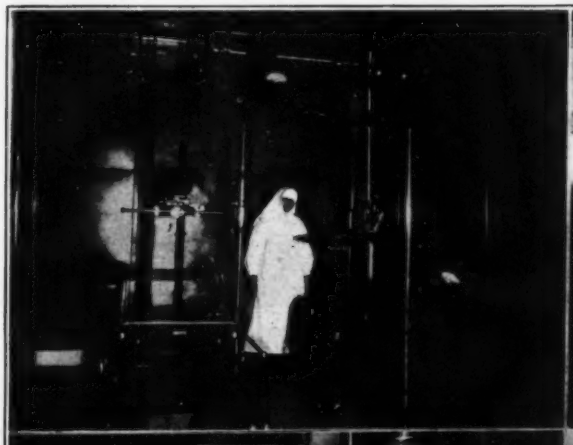
Nurses' Dining Room

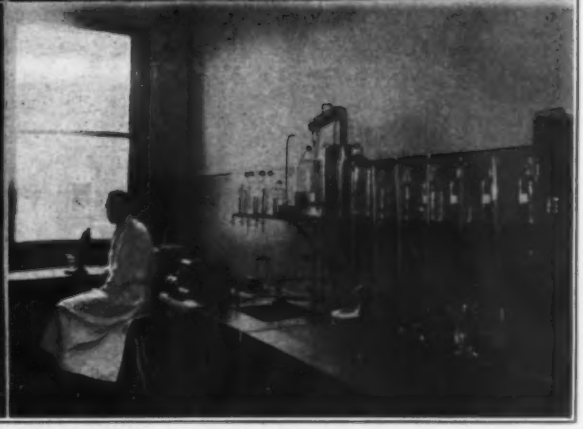
Bed Room

Demonstration Room



Nurses' Classroom



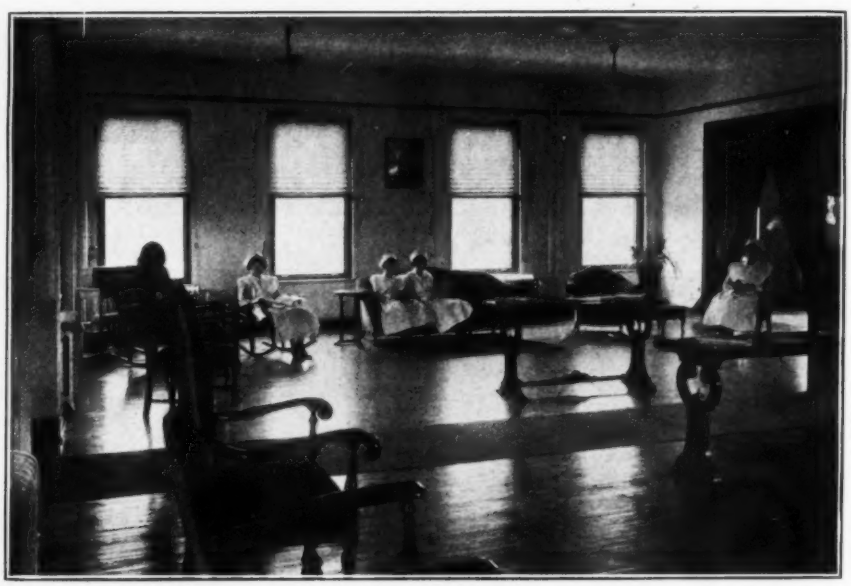


Top: X-Ray Room; Laboratory. Bottom: X-Ray Treatment Room; Laboratory Section Room.
ST. MARY'S HOSPITAL, GARY, IND. Hermann J. Gaul, Architect, Chicago, Ill.

1925 GRADUATES, ST. MARY'S MERCY HOSPITAL, GARY, IND.

Boulevard on Sixth Avenue in the near future. The total capacity of the hospital is 150 beds. It is a first-class institution, modern and up-to-date in all its methods. A highly qualified medical and surgical staff, a self-sacrificing Sisterhood, and an efficient class of graduate and student nurses minister to the wants of suffering humanity. The personnel of the institution consists of a resident chaplain, twenty-three Sisters, who have charge of various departments, assisted by graduate nurses, a pathologist, a technician, two house physicians, thirty student nurses and four orderlies.

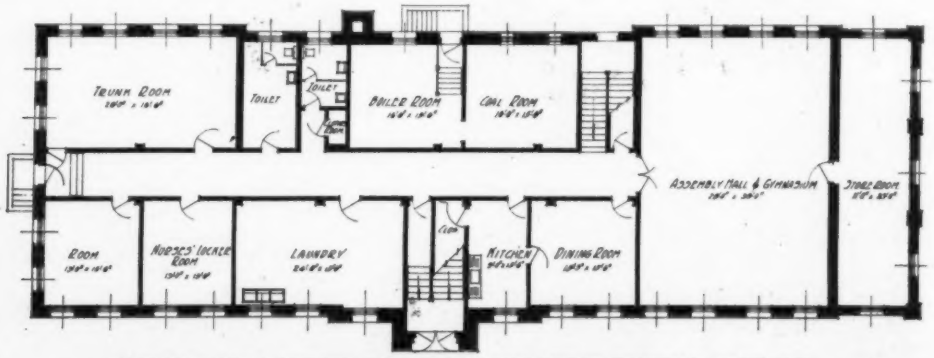
On December 8, 1914, more than a year after arriving in Gary, they gladly vacated the old place for the new on Tyler and Fifth Streets. To begin with, only the first, second and ground floors were used, the third and fourth were gradually opened as needed. The growth of the city was so rapid that after a short period of four years the Sisters were forced to build again. In the fall of 1917 a new wing was added on the west providing a Convent Home for the Sisters, quarters for the working girls, and a large, beautiful chapel. Just six years more had been added to the hospital records, when once more it was found necessary to build. This time a large laboratory and morgue. The space occupied by these in the main building was utilized to enlarge the x-ray department and add to it a treatment room.



NURSES' LIVING ROOM, ST. MARY'S MERCY HOSPITAL, GARY, IND.

If St. Mary's Mercy is to keep pace with the city, it will no doubt be called upon to extend the building to the

The work of a hospital is so complex that it is difficult to convey by statistics an adequate impression of the services performed. To some, however, a short resume of such services might be of interest. We are greatly in-



BASEMENT PLAN, NURSES' HOME, ST. MARY'S MERCY HOSPITAL, GARY, IND.
Hermann J. Gaul, Architect, Chicago, Ill.

TYPICAL FLOOR PLAN, SECOND AND THIRD FLOORS, NURSES' HOME, ST. MARY'S MERCY HOSPITAL, GARY, IND.
Hermann J. Gaul, Architect, Chicago, Ill.

debted for much moral and material assistance to many of our Gary friends, particularly to Father Jansen, Captain Norton, and Mr. W. P. Gleason.

In planning a nurses' home it has been the desire of the authorities of St. Mary's Mercy Hospital to duplicate, in so far as possible, true home conditions. The building of brick and semi-fireproof construction throughout, fronts on Sixth and Polk Streets. It is entirely free on all sides, thus insuring plenty of sunshine and air. It consists of a basement, three floors, and an attic. The heating plant, hot water, is located in the building proper.

In the basement is a large room, serving usually as a gymnasium which, however, may also be utilized for dances, shows, lectures, parties and hospital staff meetings. The room is equipped for basket ball. In close proximity to this gymnasium is a fully equipped kitchen and a dining room, both of which are open to the pupils at all times. Here they may prepare individual lunches or small dinners. As the evening meal is served somewhat early in the nurses' dining room in the hospital, many avail themselves of the facilities of this kitchen to prepare a light lunch before retiring. Here, too, are prepared any refreshments which may be served at parties and those served at the monthly hospital staff meetings. The basement also houses a laundry where the nurses may care for such articles as are not accepted by the laundry of the hospital proper. A second large, well-lighted room fully equipped, serves as a nurses' demonstration room.

The first floor is occupied by an office for the superintendent of nurses and another for the instructress of nurses, a classroom, a library containing about 150 reference books and several library tables. Here the pupils may find quiet for their study. On this floor are also located a large recreation room with victrola, radio, and piano, and a reception room excellently and comfortably furnished.

The second and third floors are given over to bedrooms of which there are thirteen double rooms on each floor. Each room is spacious and contains at least two windows and two large clothes closets. Each room is furnished with two beds, a dresser, table, and chairs. Each floor has two bathrooms, with a tub and shower in each bathroom. Each floor also has a large, screened sun porch and is equipped with an electric call bell, electro-voice call system and waste chutes. The attic has been set aside for trunk storage.

All halls are well lighted and wide and of terrazzo construction, while the floors in the rooms are of hard wood. The electricity for the lighting system is supplied by the city.

Community Responsibility of Hospitals[1]

E. H. Lewinski-Corwin, Ph.D., Director, Hospital Information Bureau of the United Hospital Fund of New York

THE theses of this paper apply to community hospitals. By this term is meant a hospital in which under the law no profit can accrue to the hospital corporation. If the financial sheet of such a hospital shows no deficit, and even if it shows a surplus, it does not lose its fundamental character. In spite of the fact that it does not have to appeal to the community for funds, having either large endowments or sufficient income from its operation, it continues to fulfill its basic purpose—it administers charitable trust funds left for the benefit of the community, and it enjoys exemption from taxation.

At the very outset, I desire to state that in the present discussion of the Community Responsibility of Hospitals only certain phases of this responsibility will be considered. A hospital's responsibilities are as numerous as are its social ramifications, and they imply not only the obligations of the hospital to the community, but also the reciprocal relation of the community to the hospital. In a brief paper all these matters cannot be discussed adequately. I will therefore limit myself to the consideration of a few points.

1. Policy

One of the fundamental obligations of a group constituting the board of trustees of a hospital is the formulation of an adequate community policy. Many a hospital plan has failed because of the lack of an intelligent policy on the part of those responsible for building the hospital. The formulation of the policy depends on many factors, and is often crippled by self-imposed limitations.

The first requirement of a hospital policy is a knowledge of the morbidity prevalence in the community, its extent and general character; the second requirement, a knowledge of the extent and character of hospital and other private and public health services already available, as well as the housing and other social conditions in the community. A third requisite for the formulation of the policy is a definite ascertainment of how much of the bed capacity should be assigned to private, how much to semi-private, and how much to ward services. The plans should be a part of broad social engineering and not dictated by considerations of immediate contingency. A

[1]Paper read before the meeting of the American Hospital Association at Louisville, Kentucky, October 28, 1925.

statesmanlike attitude should likewise be taken with reference to providing for out-patient, convalescent and chronic patients. The relation of the hospital to the patients and their families, to its own medical staff, to its nursing staff, to the officers of administration, to the various social and scientific agencies in the community as well as to the medical profession generally, are important considerations in the formulation of a policy.

2. Discharge of Implied Moral Obligation

There exists a general tacit understanding on the part of the public that on assuming their office, hospital trustees have accepted a moral obligation with respect to the community and to those who come to the hospital for treatment. A part of this tacit understanding which exists and which the average person takes for granted, is the assumption that the medical men associated with the hospital are selected on the basis of merit and for no other reasons, that the resident staffs of physicians and nurses as well as other employees are well supervised, and that no negligence of any kind, no discourtesy nor discrimination are tolerated. The public not only assumes these things but has a right to these assumptions, and it is the responsibility of the hospital to see that this tacit trust is properly discharged.

3. High Type of Performance

The mere existence of a hospital with all its equipment and staff does not create a community hospital; it merely affords means for aggregating the sick. Most of them could be treated by the same physicians in their homes. The important feature which differentiates the treatment in the hospital from that in the patient's home is the opportunity it offers for organized and supervised team work, for critical analysis of the performance, and for the advancement of the standards of medical education and practice in the community. This assurance to the community that the practice of medicine in the hospital is of the highest type attainable and that it sets the pace and promotes the best type of general practice in the community, constitutes the civic responsibility of the hospital which is of equal importance with that of the actual care of the sick within the hospital.

Through the American College of Surgeons the medical men themselves, to their everlasting credit, created the machinery for control of their work and for raising the standards of performance. It is a social obligation devolving upon the trustees to strengthen by every possible means the efforts of the American College of Surgeons so that the minimum standards which have been formulated by the College should not become a mere parade uniform, qualifying the hospital for endorsement by the College, but rather a real, living, keen appreciation of community responsibility. The proceedings of the medical and surgical conferences in the hospital, the results of performance, and the "calamity book" of the hospital, should be of as much vital importance to the trustees in the discharge of their community responsibility as are the financial balance sheets.

4. Broader Hospital Opportunities for Physicians

With regard to medical practice, the hospital's obligation is not limited to the physicians and surgeons on its own staff. Medicine has become a highly progressive science, requiring many ancillary departments for its practice, and the hospital has a community responsibility of supplying the physicians in its community with opportunities of periodical contact with the best hospital practice. In another connection, I have outlined a plan whereby, it seems to me, it becomes feasible for a larger number of physicians in the community to acquire hospital connections than is the case at the present time. I am not arguing for "open" hospitals, but for a method of procedure whereby the so-called "closed" hospitals can offer hospital opportunities to a larger number of physicians and can utilize more generally their facilities for diagnostic service and for teaching.

The enormous increase in the number of hospitals, has made it possible for most, if not all, of the graduates of medical schools to obtain internships, if they so desire. In the large majority of instances this opportunity is taken advantage of, although only a few states make a year's hospital residence obligatory for licensure. In some instances, I believe it is obligatory for an M.D. degree. This to my mind is a very desirable requirement, and I believe that all the states should go a step further and in cooperation with the American Medical Association certify hospitals for intern training, so that the year or two spent by an intern in a hospital will really be a year of work under competent direction and not mere drifting. The responsibility of the hospital in this field of training is increasingly recognized and should be discharged with ready cooperation in the interest of the treatment of patients as well as of the training of physicians.

5. Delimitation of Responsibility for Nurse Training

Aside from food service no other branch of hospital administration is so frequently an object of criticism by the public as that of nursing. This criticism is often unjust, and patients are frequently not willing or able to realize the difficulties under which the hospitals labor in supplying an adequate amount of competent and courteous nursing service. The criticism nevertheless persists and is in certain ways well-founded. The hospital may not be responsible for certain deficiencies, but the community does not understand the difficulties under which the hospital labors in this connection and which are beyond its control. Institutions should make an effort to set the problems of the nursing situation clearly before the public and to define the extent of their own community obligation in the matter. With the enormous increase in hospital facilities on one hand, and the expansion of opportunities which have opened themselves for women in all branches of life and work on the other hand, the difficulty of obtaining an adequate supply of the proper kind of women to do nursing is constantly becoming greater. Furthermore, the just demands of nurses for good living quarters, proper training, and shorter hours of work, and the onerous and often impractical restrictions of some state educational authorities, are making the situation still more difficult in and outside of hospitals. The forces governing the demand and supply of nurses are beyond the control of hospitals. The hospitals should make the community recognize this fact. The discharge of its civic obligation by the hospital is fully met when it provides the best facilities possible for the training of qualified nurses, by inculcating in them a spirit of genuine service, and by making the living and working conditions for them in the hospital as pleasant and conducive to the best results as possible.

In New York State we are by law allowed to train another group of nurses called "nurse attendants." Their educational requirements for admission to the course are lower than in the case of nurses, and their training is of nine months' duration. Not much has been done as yet by the hospitals in training this type of attendant. I believe, however, that the exigencies of the situation may call for the training of this subsidiary type of nurse in larger numbers in order that the nurses can be relieved of certain types of service in and outside the hospitals. I believe the hospitals should take greater interest in the training of the nurse attendant as a part of their respon-

sibility to the community for the training of caretakers of the sick.

To summarize this part of my statement, I will reformulate it by saying that with regard to nursing care the community obligation of the hospital is to provide clinical opportunities for the training of such type or types of caretakers of the sick as the combined wisdom of the organized medical profession and of the educational specialists may determine. How best technically the instruction in non-clinical subjects should be carried out is not a matter of vital concern for the hospitals; their duty is to see that the services of the pupil nurses are properly supervised, that they are discharged with care and devotion to the task, that the patients receive an adequate amount of nursing care, and that kindliness permeates the relations between nurses and patients.

6. Availability of Hospital Facts

The community is entitled to information with regard to the services performed by the hospitals and the costs involved in furnishing such services. The machinery devised for the discharge of this community service on the part of the hospitals is through the annual report, which as a rule is inadequate in that it usually deals somewhat too much with "the dry bones of housekeeping and the hotel register," and very little with the vital thing, the medical and surgical services rendered. I do not advocate publication in an annual report, which is intended chiefly for the laity, of detailed medical statistics, but certain facts properly interpreted as to what the hospital has accomplished during the year are essential. The more the community is appraised of the real problems and achievements of its hospitals, the more likely it is to take an intelligent interest in them.

Medical statistics, however, ought to be made available in some form or other for the benefit of medical science and demography, and by making these available the hospital would be discharging a very important community responsibility. When you consider that there are upwards of half a million hospital beds in the United States and that probably about seven million persons are cared for in hospitals in this country annually, you will realize what an enormous contribution the hospitals could make to the understanding of the problem of disease in its various ramifications, if in some way the cumulative experience of these hospitals could be made available. As it is, this vast and important reservoir of information is not utilized, except perhaps in a limited way by each institution for its own immediate purposes.

In larger cities, machinery for the collection of such statistics could easily be organized. Such central bureaus of information would give the hospitals of the community a great deal of valuable information concerning hospital needs, problems, and achievements. Moreover, a central statistical office would be in a position to render valuable service to member hospitals at a cost lower than if the hospital should attempt to do the work independently. Furthermore, it would furnish them with a basis for vital comparisons prepared on a uniform basis. In making comparisons, it is essential that statistical units be strictly comparable. Hospital mortality affords a good example of using comparative statistics with a grain of salt. Some hospitals do not include in the mortality rate patients dying within 24 or 48 hours after admission, while others do. In the case of surgical mortality and the statistics of end-results, the latitude is much greater. It is arbitrary to set a limit of time within which a death following an operation is ascribable to it or to say that the end-result is to be judged by developments within such and such a period. Arbitrary and erroneous as some of the assumptions may be in the case of surgical statistics, they would become much more amenable to comparisons if all were subject to the same degree of error, i. e., if there existed a uniform rule of statistical procedure. Central statistical editing is more likely to bring about comparability than scattered endeavors. That there is evidently a need of this kind of service, is evidenced by statements by eminent surgeons. Dr. Harvey Cushing in one of his annual reports as Surgeon-in-Chief of the Peter Bent Brigham Hospital in Boston, discussing the surgical experience of his hospital and the desirability of comparable figures from other hospitals states: "It would be an exceedingly desirable thing if . . . steps were taken to systematize these matters and to inaugurate a uniform method of presenting the surgical reports from all major hospitals in the country. If this were done our hospital reports might become of greater clinical value for reference than many of the occasional papers in medical literature, and I see no reason why they should be surrendered, as many of them are, to the administrative activities of the institution alone, which after all are merely incidental to the main purpose of the institution—the professional care of the patients.[2]

Dr. Wm. J. Mayo, in an address before the Clinical Congress of the American College of Surgeons at Montreal in 1920, stressed the value of the "study of the mass of surgical material." He says: "In order to secure a perspective which will not be distorted by the minutiae, the mass rather than the details should be considered. Such an investigation will sometimes point out a way by which an intensive study of outstanding failures may be made to yield valuable suggestions."[3]

Dr. Eugene H. Pool in a discussion of end-results before the Clinical Congress of the American College of Surgeons at Boston in 1922, said: "The knowledge of the results of types of operations and the amenability or resistance of various lesions to surgical efforts is of inestimable value to the surgeon. The most effective, far-reaching instruction is derived from the grouping and analysis of an accumulated mass of these cases."[4]

7. Provision for Institutional Convalescence and for the Reclamation of the "Chronics"

Through the social service department, the hospital gives effective evidence that its interest in the patient is not confined to his progress while in the institution. This responsibility should be made to extend a little further. Proper convalescence has been recognized as an indispensable part of the care of the sick. As Dr. John Bryant has pointed out on the basis of a vast experience: "The average patient who has been sufficiently ill to require the average length of stay of three weeks in a hospital for acute diseases, has also been sufficiently ill to require an additional average period of three weeks under observation in a convalescent home."[5] Very often the good accomplished in the hospital is wholly or partially undone by the lack of proper convalescent care.

The extension of institutional convalescence to those who for one reason or another cannot obtain proper convalescent care in their own homes will be directly or indirectly provided by the hospitals which take a real interest in their patients. Ample convalescent facilities make it possible for the hospitals treating acute conditions to discharge patients earlier, in this way increasing, so to speak, the effective hospital facilities of the community, and providing care in an atmosphere more conducive to recovery and at a lower cost than is possible in an acute hospital. The movement for institutional convalescence is gaining momentum.

This cannot be said, however, of provision for the chronically ill, which has been a sadly neglected phase of our hospital policy. The existing hospitals for the care of people afflicted with ailments generically and dismally known as chronic are too few and, with several notable exceptions, not conducted on the highest plane of scientific medicine. In many instances, these hospitals are designed for custodial care of hopeless cases. There is need for institutions of this type, but what is urgently needed in addition are hospitals where chronically but not hopelessly ill patients can be salvaged and reclaimed—institutions similar to the sanatoria for the treatment of tuberculosis. Many of the chronic patients are not adequately cared for in the out-patient departments, to which they apply, and many others fall a prey to various charlatans or cults. The sufferers from the various rheumatic diseases; from cardiac and vascular troubles of various kinds and degrees; those with mucous colitis, and other gastro-enteric diseases who cannot carry out the required mode of life in their homes; those with affections of the neuromuscular system; with leg ulcers; renal affections; orthopedic cases, and many others require the facilities of such special institutions. Boas, Rappleye, and others have called attention to the need of study of the progress of chronic diseases, and these hospitals when properly manned will offer an opportunity for such study. The hospitals can hardly shirk their community responsibility in providing for the adequate study and care of this huge group of sufferers.

8. Provision for Contagious Disease Isolation

There are only two more points which I should like to bring up in this limited paper. One is the lack of provision in the smaller communities of isolation units in the hospitals to take care of emergency cases of contagious disease. A tragic incident was recently reported by the New York State Department of Health.[6] A child was taken severely ill with sore throat in the country near a small city, and the mother who was a summer resident brought the child to the hospital. The admitting physician recognized the case as that of diphtheria and refused to admit it. The child was already in a moribund condition, and the suggestion was made that it be taken to the office of the health officer of the town. When finally the child was brought to the office of the doctor, it was dead. The report of the Health Department comments upon the case thus: "Just what, if any, moral obligation rests upon a hospital in the face of such an emergency is a question of judgment which could be determined only with all the facts at hand," and points out what seems to be a clear community responsibility on the part of the hospital. "There should be provided in every city, by some means, a place in which cases of communicable disease may be isolated, and cared for in emergencies. If there is a general hospital this would seem to be the logical place."

9. Participation in Health Promotion

With the modern emphasis upon prevention of disease, the hospital cannot afford to abstain from an active and direct part in this movement. The idea of periodic medical examinations of the well or apparently well is taking root, and the hospital would be discharging a very important function and community responsibility if it placed its facilities at the disposal of this important health crusade.

As I stated in the beginning, within the compass of a short paper only a limited number of community responsibilities can be touched upon. From this brief list of the long array of community responsibilities of the hospitals, one can easily draw the deduction that there is hardly any other institution in the social structure that has so many community responsibilities of so vital a character as has the modern hospital.

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[2]Sixth Annual Report—For the Year 1919, Peter Bent Brigham Hospital, Boston, p. 73.

[3]Surgery, Gynecology and Obstetrics, Feb. 1921, pp. 97-102.

[4]Bulletin, American College of Surgeons, Vol. VII, No. 2, Jan. 1923, p. 15.

[5]Boston Medical and Surgical Journal, Jan. 25, 1923.

[6]Health News, New York State Department of Health. Vol. II, No. 37, Sept. 14, 1925.

Troy Hospital Observes Diamond Jubilee

SEVENTY-FIVE years of service to Christ the Lord represented by suffering humanity! Certainly a record worthy of special notice! That is what Troy Hospital, Troy, New York, celebrated during the week beginning Nov. 15. The Sisters of Charity, the members of the medical and nursing staffs, and the citizens of Troy have been receiving felicitations from clergy and laity and coworkers throughout the country on this diamond jubilee occasion of their beloved institution.

Civic Celebration at Music Hall

On Tuesday evening, Nov. 17, a public celebration was held in Music Hall. Hon. Alfred J. Talley of the Court of General Sessions of New York and Dr. Joseph Collins of the New York City Hospital, an author of note, were the principal speakers. Mayor Clinton of Troy presided, La Salle Institute cadets acted as ushers, and several graduate nurses

DIAMOND JUBILEE, TROY HOSPITAL, TROY, NEW YORK, 1850-1925.

and seniors from the training school directed the visitors. The members of the medical board of the hospital were seated on the stage with the mayor and the speakers.

Dr. M. D. Dickinson, head of the medical staff introduced Mayor Clinton, who, in voicing his congratulations, said: "Troy is indeed proud of the Troy Hospital. It is proud of all its hospitals that minister to the wants of the suffering, and as your Mayor, I am proud to be here to add the approval of Troy to your wonderful work, and to wish the management, the staff, and nurses Godspeed and success for many years to come."

Judge Talley in his address mentioned the conversion to the Catholic faith of Elizabeth Bayley Seton, the granddaughter of an Episcopal minister, and her subsequent founding of the American Sisters of Charity, who in 1850 were united with the French Daughters of Charity founded by St. Vincent de Paul. He told how the Sisters of Charity came to Troy. He had a word of praise for the sacrifice and unselfish cooperation of the medical board and the good will and sympathy of the public. He took occasion to present the life of the Sisters of Charity as an antithesis of the life of many a modern woman, who, the judge said, on the stage, in literature, and on the streets is rapidly falling from the high plane she formerly held.

The last speaker, Dr. Collins, was introduced by Dr. D. W. Houston, who spoke at the golden jubilee celebration of Troy Hospital, 25 years ago. Dr. Collins' address dealt with "What a Hospital Means to a Community." He mentioned the fact that Troy Hospital is only one of the 66 hospitals under the Sisters of Charity in the United States. Speaking of the functions of a hospital, Dr. Collins said: "A community without a hospital is as inconceivable as a city without a church. It puts into action the practical theories enunciated from the pulpit, and it is rare that the hospital does not heal the moral wounds at the same time that it cares for the body's needs."

Solemn Mass of Thanksgiving

The diamond jubilee celebration closed on Thursday morning, Nov. 19, with a solemn high Mass of Thanksgiving "coram episcopo" at St. Mary's Church, Rt. Rev. Edmund F. Gibbons, bishop of Albany, being present in the sanctuary. Priests from every parish in the diocese attended, together with Troy Hospital nurses, student nurses, Sisters of Charity, Sisters of St. Joseph, Sisters of Mercy, Sisters of the Holy Name, members of the Troy Hospital staff, Christian Brothers, and cadets of the LaSalle Institute. The bishop was assisted by Rt. Rev. Msgr. Joseph A. Delaney, V. G.; Rt. Rev. Msgr. Michael J. Looney; Rt. Rev. Msgr. John P. Glavin; and Rt. Rev. Msgr. Wm. P. Brown.

The Mass was celebrated by Rt. Rev. Msgr. Wm. P. Fitzgerald with Rev. Peter J. Donnelly, deacon, Rev. Wm. H. Walsh, subdeacon, and Rev. John E. Reidy, master of ceremonies, assisted by Rev. Geo. B. Rennie. The main choir of St. Mary's church sang the Mass. Rt. Rev. Msgr. John T. Slattery delivered the sermon.

Msgr. Slattery traced the history of the hospital from its opening in 1850 in a four-story brick building built to replace the wooden sheds in which sick Irish immigrants were being cared for. Sixteen years later, when the railroad had been built alongside the hospital a new building became necessary. This was begun in 1868, and served the community for 42 years. Then it was found that its capacity of 125 was inadequate, and so 15 years ago the present building was erected. Now 2,700 persons are being treated yearly in the Troy Hospital and 3,400 persons given free dispensary treatment.

Congratulates the Sisters

After reviewing the history of Troy Hospital, Msgr. Slattery said: "More than fifty per cent of the patients in the Catholic hospitals of the United States, it is found, are non-Catholics who make choice of our medical institutions for the excellence of the service. Only God can know how the gentle ministrations of the dear Sisters in charge have banished prejudice and won many to the fold of Christ.

"Voicing the gratitude of the city of Troy for 75 years of service to mankind, I offer hearty congratulations to the Sisters of Charity for their devoted exercise of the corporal and spiritual works of mercy. Our pride in their rich achievements will also assume substantial expression. This diamond jubilee will indeed call forth liberal contributions from all citizens, rich and poor alike. St. Mary's in common with all other Catholic hospitals—one-fourth of the total number in the United States—every year has a financial deficit due not to prodigal spending but to insufficient revenue. Today our hospital is burdened with a mortgage of over $300,000. Sustained by a strong faith in your generosity, the Sisters of Charity were brave

DIAMOND JUBILEE, THE TROY HOSPITAL, TROY, NEW YORK, 1850-1925.

enough to undertake a debt of over a half a million dollars to build the present hospital. Some generous hearted citizens will surely seize this opportunity to lighten the present burden."

Jubilee Indulgence

During the services, Bishop Gibbons pronounced a jubilee indulgence of fifty days to all those taking part in the celebration. The Bishop congratulated the Sisters and paid a glowing tribute to the members of the hospital staff, the nurses, and the Sisters of Charity. Bishop Gibbons said the success of Troy Hospital was a gift of the Eternal Father and that the jubilee Mass was an act of thanksgiving to God.

Surely everyone who took part in this great jubilee celebration felt, to paraphrase the words of Judge Talley, and of a certain other well-known author, that the occasion was Troy's "whitest day."

A Five Year Course in Nursing Leading to the Degree of B. S.

Sister M. Rodriguez[1]

THE demand on the part of hospitals generally for instructors, technicians, anesthetists, etc., is today admittedly persistent. Herein is emphasized the imperative need for courses in specialized subjects in schools for nurses. Clearly, such specialization is hardly within the reach of the first three years of training which must necessarily be devoted to the more fundamental principles of nursing. A post-graduate curriculum is therefore demanded. It is the purpose of this paper to discuss briefly the requirements for admission to this advanced course, to suggest the feasibility of encouraging subjects to follow the course by offering as an inducement a degree over and above the diploma allotted at the end of a three years' training, and finally to submit for general criticism a curriculum which would appeal to the aspirant as useful and inviting.

Before approaching these several items it seems opportune to impress on the authorities of Catholic hospitals the importance of attacking this problem promptly. May it not be truly said that up to the present we have been rather following than leading? It is here clearly within our reach to be at least amongst the leaders and it is to be remembered that any initiative on our part in this matter cannot but reflect most salutarily on our schools.

Now, as to the above items. On the supposition that the degree B.S. is desired, the minimum requirement for entrance on this advanced course should be a full high school course of four years or its equivalent, representative of fifteen units. Preferably these units should include such subjects as have a close bearing on the specialties to be followed. Such would be chemistry, physics, and biology. However, this would not be insisted upon as obligatory. The other requirement would be the regular three-year course in nursing in an approved hospital.

As regards this degree, it is today the accepted procedure in all colleges and universities conferring the degree of B.S. to specify the branch in which the degree is granted, as the degree B.S. in Medicine, B.S. in Dentistry, B.S. in Engineering, etc. Accordingly, it would appear fitting to abide by this form, and have the degree read "in Nursing." The degree should be awarded after two years of advanced work or its equivalent. Credits during these two years should sum up to at least one hundred and twenty. Half of these should be of an academic character, the other half should be in subjects proper to hospital training.

On the basis of four hours daily spent in hospital work, it would seem quite easy to meet the academic demand, provided classes in academic subjects are available. In case the hospital is affiliated with a college the solution would not be difficult. Where this does not obtain, the academic work might be followed in summer courses and night courses in an approved college. The summer courses and night courses might offer a more ready solution for some in that the work in these schools is of a more intensive type.

As a schedule for the academic work the following is suggested:

First Year	—Chemistry	10 credits
	Biology	6 credits
	English	6 credits
	Modern Language (French, German, Spanish)	6 credits
	Philosophy	8 credits
Second Year	—Physics	4 credits
	History (Suggested of Medicine)	8 credits
	Modern Language	6 credits
	Psychology	6 credits
	Total	60 credits

Where biology is offered as entrance, botany or comparative anatomy may be substituted.

For medical subjects the following is appended:

First Year	—Anatomy (Gross and Minute)	6 credits
	Physiology	4 credits
	Nursing	4 credits
	Dietetics	5 credits
	Hospital Administration	2 credits
	Hygiene	2 credits
Second Year	—Materia Medica	6 credits
	Anatomy (Gross and Minute)	6 credits
	Nursing	4 credits
	Public Health	2 credits

Remaining subjects to be chosen from the electives: Anesthesia (operating room and lectures); Clinical Microscopy; Education; Physiotherapy; Laboratory Technique; Operating Room; Diet Kitchen.

It is to be noted that a credit represents sixteen hours, clock hours, of actual classroom work.

The writer recalls with a great deal of interest the visit, some four or five years ago, to our hospital, of the Inspector of Medical Schools of the State of Pennsylvania. In his conference with the superintendent of the school of nurses he insisted that strong emphasis be laid on the practical subjects even at the expense of the theoretical Should not this same idea prevail in post-graduate courses by featuring therein the laboratory work? At least one-half, if not more, of the time allotted to hospital subjects should center about the laboratories, diet kitchen, operating room, and wards.

Finally the first obligation of the school of nursing to the public, is to send forth nurses of standard calibre. Nothing is more effective in this direction than up-to-date instructors. It seems that every Sister directly associated with the hospital lays claim to the role of instructor, whether she meets the students in the class room or in the wards. Hence, we would deem it advisable, though not as yet a necessity, that every Sister engaged in hospital work should follow the post-graduate course and thus contribute towards suffering humanity more efficient service.

[1]Of the Georgetown University Hospital, Washington, D. C.

The Roentgenologist as a Staff Consultant[1]

J. P. Kerby, M.D., Holy Cross Hospital, Salt Lake City

Scarcely a quarter of a century ago a hitherto relatively unknown scientist, in a comparatively small German University, observed an epoch-making phenomenon. It is probably within the bounds of accuracy to state that no single technical discovery has exerted a greater influence on medical progress than the observation by Roentgen that a platino-barium-cyanide cardboard fluoresced in the presence of an activated Crook's tube and that a photographic plate recorded an image of an interposed key. One may safely say, I believe, that the discovery and utilization of the x-rays has done more than any one agency to advance medical and surgical diagnosis to its present high plane of efficiency.

Roentgenology, latest born of the major specialties, like many youngsters, may at times seem vociferous. This is undoubtedly due to the enthusiasm of some of its neophytes. For this reason, varying views of its value in solving medical problems are held. In this connection a quotation from one of the first books published in America on the use of the x-rays is as true now as when it was written in 1902. "There is a tendency among medical men either to underestimate the value of the x-ray as an aid to diagnosis, or to fail to appreciate its limitations." The progeny, so to speak, of this agent, the film, the screen image, the biological action, are far more complex in their interpretation than the parent in its manifestation. Anyone may view a film or observe the fluorescent screen, but it is not always true that he who runs may read. Recitation of a page of Greek Grammar by a beginner means no more to him than the observation of many visceral films does to one not familiar with roentgen shadows.

Familiarity with the shadows cast by body tissues may be acquired in one of two ways, either apprenticeship under a master, or by the slow, tedious, often disappointing, task of learning by personal experience, which the pioneers pursued. One can gain a knowledge of roentgenology in no other way; but having acquired a reasonable amount of information, and essaying to go on, it is to his fellow-practitioners, general and special, that he must look for further knowledge. By permitting him to observe operations and postmortems, and by informing him of the progress of cases, the profession contributes to the further education of the roentgenologist. The roentgenologist in his turn, by giving advice as to the possibilities of illuminating some obscure problem of diagnosis or treatment, may in some measure return the debt he owes the profession in general.

It is in this latter position that the roentgenologist most nearly approaches his proper role, that of a true consultant. In order to practice his specialty in a worthwhile manner, it is necessary that he have more than a knowledge of its special fields; he should possess at least as broad a knowledge of all the specialties as is required by any other practitioner of medicine, not excepting the pathologist; though, of course, he need not have the special microscopic training of the latter. He must be familiar with the normal structure and functions of the various tissues and organs, with the alterations incident to disease, and must be able to recognize the shadow pictures of health and disease, as well as to recall the anomalies and variations of development.

In the early days of the specialty, its utilization required a great deal more mechanical ability and ingenuity than now, but, during the past decade, mechanical and electrical experts have so successfully directed their attention to these difficulties, that it is now possible to train technicians to produce films of a very high degree of perfection, thus permitting the roentgenologist to devote most of his time and thought to the consideration of the purely medical aspects of the work. These aspects have become so protean that many roentgenologists are already limiting their work to a single subdivision, e. g., the gallbladder, the skull, the oral cavity. Contrast this with the attitude of some men that the roentgenologist is nothing more than a glorified photographer or a super-technician, or the statement of a widely known western surgeon who recently remarked that he did not regard such a knowledge of medicine and surgery as is acquired in undergraduate medical schools as essential for practicing this specialty. In many cases positive diagnosis can be made from x-ray findings; often it cannot. The clinical and roentgen findings must be synthesized.

Ofter the roentgenologist can give an early report; in many cases he cannot. Too often the phone rings for a report before a routine examination is completed. To do one's work with the highest degree of accuracy one must be permitted to do it properly and not be rushed. Too frequently a report is desired before the film is dry.

Occasionally a re-examination is necessary. Even then a positive diagnosis cannot always be made. A single example will show why. The roentgen rays register variations in density. A pleural sac filled with serum shows essentially the same density as one filled with blood or pus. Obviously, here, differentiation is impossible.

Probably no more striking example of the necessity for cooperation between the clinician and roentgenologist will be found than in the case of diseases of the chest. In pulmonary tuberculosis, the x-ray is usually less helpful in deciding whether a process is active or latent than in furnishing a conception of the exact location and extent of the changes present. An accurate idea of the location of a pathological process is usually obtained, but whether is is tubercular or non-tubercular, or a combination of the two, cannot always be decided from the x-ray study. This is especially true in the case of many who are engaged in occupations where dust and mineral particles are present. In many cases, individuals subjected to this environment present lung changes which are almost impossible of differentiation. However, in many non-tuberculous conditions, practically pathognomonic observation is made. Some of the conditions which offer characteristic findings are metastatic carcinoma, pleural effusion and thickening, foreign bodies and aneurism. The differentiation between a tumor and an aneurism is not always possible. Hodgkin's disease often shows characteristic findings, but usually collateral methods of examination must be utilized. Dermoid cysts, sub-sternal thyroid, and persistent thymus are other conditions showing definite change. Knowledge as to the size of the heart and great vessels, particularly of the left ventricle and the aortic arch is obtained. Especially in obese individuals, where the usual methods of examination are deceiving, this is of great value.

Many of the recent advances in urological diagnosis are associated with the roentgen examination of the genito-urinary tract. Demonstration of the presence of stones in the kidneys, ureters, and bladder is made in a

[1]Read at the 5th annual meeting of the Mountain States Conference of the Catholic Hospital Association at Salt Lake City, Utah, Sept. 2, 1925.

very high percentage of cases. Ureteral catheterization, pyelography, and cystography are indispensable in many cases. In obscure renal conditions, it is probably advisable to consult the urologist before the roentgenologist. Pregnancy is demonstrable in the 5th month.

The first utilization of the rays was in the study of the osseous system, and this is the type of case in which it is oftenest used. Fractures and dislocations, location of foreign bodies, arthritides, new growths, anomalies of development such as cervical ribs, sacralization of transverse processes, supernumerary bones, disturbances of nutrition, calcified glands and bursae, bone infections are all demonstrated. Fluoroscopic examination of bones for fissure and slight fractures is not advised. In the reduction of fractures it might well be used more extensively.

In the skull, abnormal calcifications, fractures, constitutional diseases, infection of the mastoid and other sinuses manifest their presence. In some cases, changes in the structure of the sella turcica suggest tumors or constitutional diseases. Charcot's disease, syingomyelia and tuberculosis produce changes in the vertebral column. Cervical ribs often suggest the cause for various neuralgias. In the teeth and sinuses, many foci of infections will be unearthed. In the oesophagus, diverticula, benign and malignant strictures and foreign bodies, will be recognized. This entire period might be devoted to the stomach and duodenum, but the mention of ulcer, malignancy, lues, polyposis, hair-ball, hernia, and eventration of the diaphragm, ulcer and peri-duodenal adhesions, stones, and thickening of the gall bladder, tuberculosis, lues and malignancy of the colon, besides anomalies of development, dilatation and redundancies, will suffice to illustrate the host of conditions giving positive or suggestive changes.

There are a few findings in the gastro-intestinal tract which are pathognomonic, but most of them are indirect and inferential, and must be interpreted in the light of the clinical picture. When one considers that only ten per cent of individuals presenting gastric symptoms have gastric pathology, and that abdominal symptoms are present in aortic, pulmonary, pleural, mediastinal and cardiac disease, in abscess, eventration and hernia of the diaphragm, in vertebral disease, in renal, hepatic, ureteral and cystic stones, diseases of the liver, spleen, kidneys, and pancreas, and many other conditions, it is easy to see that while the roentgenologist might be correct in reporting no evidence of ulcer, the patient might very well be pardoned if disgruntled when given negative information.

The only way in which this haphazard examining can be overcome is by a thorough study on the part of the clinician before referring the patient for an x-ray examination, and by sending the patient to the roentgenologist for such study as the symptoms suggest. In this connection, I would call your attention to the method of study of the gall bladder elaborated by Graham, Cole, and Copher, of St. Louis. This method has recently been simplified so that it is now possible to administer the dye by mouth and secure excellent cholecystograms.

Despite the many conditions enumerated in which positive definite information can be given, it is easy to understand from the foregoing resumé why in many cases the roentgenologist can give only a probable diagnosis, and why in so many cases his report seems vague and indefinite. But if conference between the clinician and roentgenologist can be had after as well as before the x-ray examination, there is no doubt that a large percentage of obscure cases can be diagnosed. But this conference must not degenerate into an attempt on the part of either to utilize the findings of the other to bolster up a preformed diagnosis. The evidence must be weighed and the diagnosis made on all the evidence.

One might continue indefinitely to relate the various and diverse ways in which the knowledge of the roentgenologist can be utilized.

The methods which are common property of the entire profession today were once the private possession of the specialist. It is he who must evaluate the diagnostic aids peculiar to his specialty before they are offered to the entire profession, and often newer methods are available before they are generally announced. So, if a patient is referred for examination and study rather than for a picture, the information obtained will, usually, be much more helpful. The roentgenologist is as much entitled to utilize such methods as he desires of diagnosing disease as any other specialist in his chosen field, and he should be permitted to employ all of his knowledge.

As much might be written on the subject of treatment as on that of diagnosis, but time limitation prevents more than a brief mention of the conditions in which x-ray therapy is indicated. In a recent book on x-ray therapy not less than 150 different diseases are listed in which x-ray therapy has been suggested and successfully used. Of course, in only a small percentage of these is it specific; but in a considerable percentage successful results have followed its use.

In dermatology, gynecology, diseases of the eye, ear, and nose, neurological and urological diseases it has been employed. As much skill and judgment must be used in the treatment of patients with this therapeutic agent as are necessary in operative surgery. Various conditions require different methods of treatment, for instance, sarcoma and carcinoma, and other malignant new growths within the bodily cavities require treatment with extra high voltage. All other conditions can be handled by machines of the type which has been used for the past ten years. However, to attempt to treat the first named conditions with machines of the last mentioned type is as much an anachronism as to revert to antiseptic in place of asceptic surgery. To mention briefly some of the conditions in which success may reasonably be expected with x-ray therapy, the following are listed: psoriasis, herpes, eczema, seborrheic conditions, pruritis (treatment of pruritis is not without danger) warts, moles, and keloids, lupus, except the dry type, basal cell epithelioma, acne, hyperidrosis, ring-worm of the scalp and beard, tuberculous adenitis, Hodgkin's disease, large spleen, myoma, and many other conditions. Whooping cough probably responds more promptly to this than to any other form of medication. Persistent thymus shows response in a very large percentage of cases. Aside from the colloid type, a large percentage of hyperthyroidism can be successfully treated. I doubt if the x-ray treatment of the thyroid increases the surgical difficulty if operation is later necessary. In selected cases of tonsilar infection striking results are had. Diphtheria carriers are sterilized in a large percentage of cases. Many reports of successful treatments of poliomyelitis, syringomyelia, and cord tumor are recorded.

There is a strong feeling among roentgenologists that the profession should undertake to educate the laity to understand that when a patient is sent to them, he is referred for an examination and not for a picture. At the present time many laymen regard the roentgenologist as a photographer. An attempt to correct this impression should be made, and I cannot discourage too strongly the practice of promiscuously showing films to patients. To my mind there is no more reason why the patient should have the x-ray film demonstrated to him than that the

pathologist should explain a blood slide or a frozen section. I doubt if the average general practitioner realizes how often the displaying of a film to a patient, his friend, or a relative, causes doubt to arise in their mind as to the ability of the family physician. The large number of times that I have been called upon to substantiate the doctor's diagnosis when some laymen attempt to interpret films convinces me that a feeling of doubt or lack of confidence in the attending physician has been engendered in their minds. What would one think of a chest specialist who would let the patient's family auscultate the chest of an incipient tubercular victim? I believe that far more mischief is done by showing them the films of the chest. Physicians should not, if for no other reason than this, ask that their patients be furnished with the films.

The film is the case record of the roentgenologist and without the case records he is as helpless as the clinician without his charts.

New St. Joseph's Infirmary

LOUISVILLE, KY.

ST. JOSEPH'S Infirmary, Louisville, Kentucky, now in process of erection, is located on a site of nineteen acres and is so oriented that there will be sunshine in every portion of the building. The hospital is designed to meet every need of the present, and what may be reasonably anticipated for the future. For that reason much study has been given to the plans, and they have been prepared for a large institution, much larger and more comprehensive than the immediate needs of the hospital demand. It is expected that the portion of the hospital being built at this time will be sufficient to meet all present demands.

A department has been provided for the immediate care of patients meeting with accident. This department will undoubtedly grow to be a large part of the hospital's work, and may be expanded to keep pace with the demand.

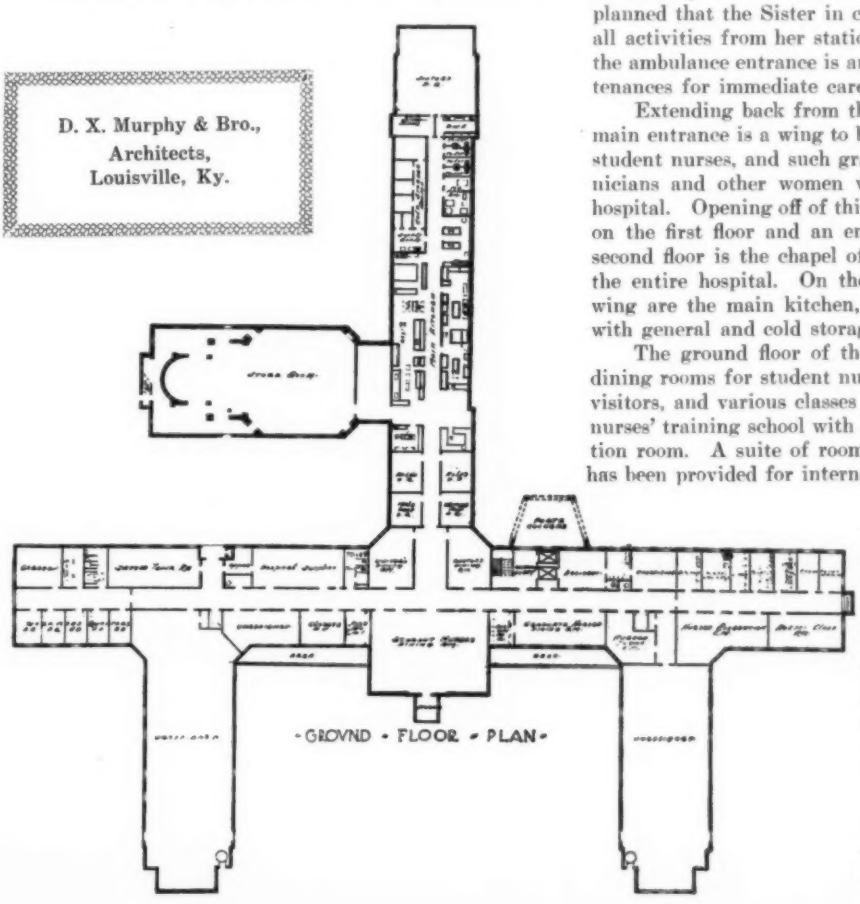
The hospital is designed in units: a portion of the main building and one of the wings extending south comprises a unit which, if detached from the group, would form the letter "T." At the center of this unit are located the rooms, that serve this unit such as serving kitchen, nurses' duty room, sink room, linen room, apparatus room, and nurses' station so that nurses on duty will have a minimum number of steps to take in reaching their patients.

In the center of the building is the administration department. Here, immediately opposite the main entrance, is the general office with connecting private offices; the staff room with lockers and toilet rooms; the outside nurses' lounging, locker, and toilet rooms, a telephone room, reception rooms, a parlor, and the parlor for student nurses. All contact with visitors and the public is had here under direct supervision of the Sister who may be on duty in the office. The ambulance entrance is so planned that the Sister in charge of the office can oversee all activities from her station in the general office. Near the ambulance entrance is an emergency room with appurtenances for immediate care of accidents.

Extending back from the main building, opposite the main entrance is a wing to be used entirely by the Sisters, student nurses, and such graduate nurses or trained technicians and other women workers as will reside in the hospital. Opening off of this wing with the main entrance on the first floor and an entrance to the balcony on the second floor is the chapel of a size large enough to serve the entire hospital. On the ground floor of the Sisters' wing are the main kitchen, the diet kitchen, and pantry with general and cold storage.

The ground floor of the main building contains the dining rooms for student nurses, outdoor nurses, internes, visitors, and various classes of help. It also contains the nurses' training school with classrooms and a large recreation room. A suite of rooms with bath and sitting room has been provided for internes.

D. X. Murphy & Bro.,
Architects,
Louisville, Ky.



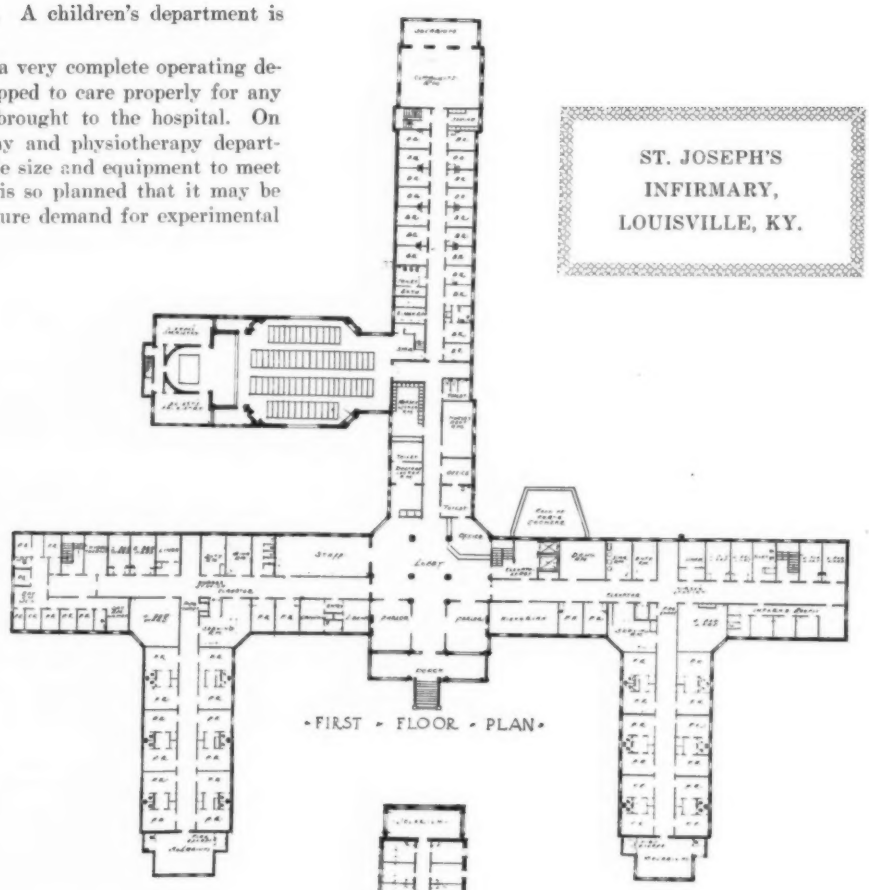
The part of the first floor not occupied by the general offices, and all of the second, third, and fourth floors of the main building will be occupied by patients. Special rooms are provided on the various floors of the main building and in the west wing for psychopathic, isolation and tuberculosis departments.

The maternity department with all its adjuncts is on the fourth floor. This department is fitted with everything necessary for the

care of mothers and babies. A children's department is also on this floor.

The fifth floor contains a very complete operating department arranged and equipped to care properly for any and all cases that may be brought to the hospital. On this floor is a complete x-ray and physiotherapy department. A laboratory of ample size and equipment to meet every present hospital need is so planned that it may be extended should there be future demand for experimental and research work.

ST. JOSEPH'S INFIRMARY, LOUISVILLE, KY.

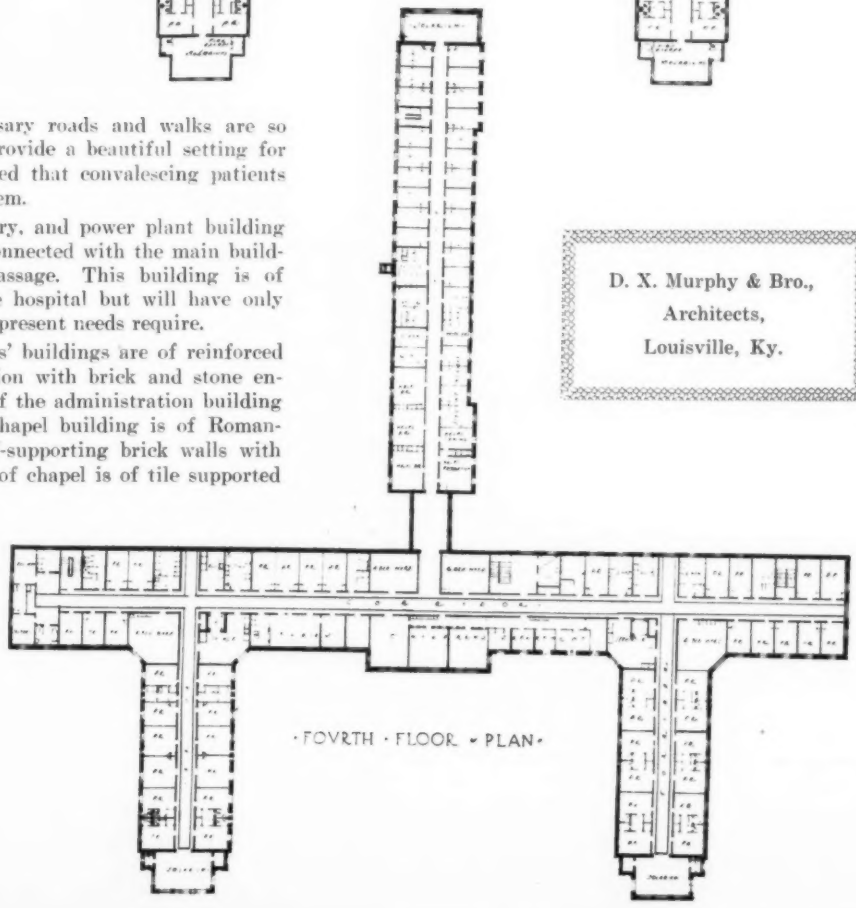


The grounds with necessary roads and walks are so parked and planted as to provide a beautiful setting for the building and so arranged that convalescing patients can make the best use of them.

The boiler room, laundry, and power plant building is located at the rear and connected with the main building by an underground passage. This building is of ample size for the complete hospital but will have only such equipment installed as present needs require.

The hospital and Sisters' buildings are of reinforced concrete, skeleton construction with brick and stone enclosing walls. The facade of the administration building is entirely of stone. The chapel building is of Romanesque architecture with self-supporting brick walls with stone trimmings. The roof of chapel is of tile supported

D. X. Murphy & Bro., Architects, Louisville, Ky.



D. X. Murphy & Bro.,
Architects.

•FIFTH • FLOOR • PLAN•

on steel trusses. The power house and laundry building has brick walls, steel windows and stone trimmings. Steel trusses support the roof.

The cost of the buildings including mechanical equipment is approximately $1,500,000.00. The contents are 3,000,000 cubic feet. This makes the cost for buildings fifty cents per cubic foot. The cost of the mechanical equipment is $325,000.00. This includes the kitchen equipment, refrigeration, laundry, sterilizing, operating, laboratory and x-ray departments. The patients' beds number three hundred, fifty-four, including twenty-four beds for children. This would make the cost per patient bed $4,200.00. The number of beds provided for Sisters, nurses and resident help is one hundred and sixty-five.

St. Anthony's Hospital, Michigan City, Indiana

On Oct. 8, Rt. Rev. Bishop Noll of Ft. Wayne, Ind., dedicated the chapel and blessed the new building of St. Anthony's Hospital at Michigan City, Ind. The dedication and blessing was followed by a solemn high Mass at which the Rt. Rev. Bishop preached an excellent sermon. Rev. Father Seimentz of Chesterton celebrated the Mass, assisted by Rev. J. Ryder of Lowell, Ind., and Rev. F. Rothermel of Reynolds, both former chaplains of St. Anthony's Hospital. The boys of St. Mary's Church sang the Mass. Rev. Father Girardot of St. Mary's Church and chaplain of the hospital acted as master of ceremonies.

Bishop Noll gave a very appropriate address on the hospital and its work. He said that the two greatest essentials in the world were life of body and life of soul, that the church cared for the soul and the hospital for the body. He paid tribute to the Sisters who have dedicated their lives to the care of the sick and complimented the work of the doctors and nurses in their efforts to serve humanity. He congratulated the good citizens of Michigan City, who have helped to make St. Anthony's one of the best hospitals in the state.

The visiting clergy and local priests were guests at a luncheon at the hospital after the ceremonies and in the evening the Sisters of the hospital gave a dinner to 51 physicians of the Medical Society.

The new addition to St. Anthony's Hospital, doubling its former capacity, has been planned according to the same architecture and erected with the same sort of material as the original structure. The entrance to the original building has been remodeled into a sun parlor, while the entrance and main offices are placed in the new addition. In an arch above the main entrance an exquisite statue of St. Anthony calls attention to the fact that St. Anthony is the guiding patron of the hospital.

The floors throughout the building are of mosaic terrazzo. The elevators are of the electric type with button-switch control.

The first floor of the new building contains the main offices, drug store, x-ray rooms, record rooms and reception rooms, and the Sisters' dining room, a beautiful, light and airy apartment. The second and third floors are arranged identically. Each contains a utility room, several lavatories, 11 hospital rooms, rooms for surgical dressing fitted with white enamel cabinets, linen rooms with oak cabinets, the sun parlors, and well-ventilated sleeping rooms for the Sisters. The patients' rooms are all tastefully fitted. Each room has outside windows; there is a bath between each two rooms and separate lavatory and toilet for each room. The third floor contains the beautiful little chapel.

The fourth floor contains additional linen rooms and lavatories, a special work room for the Sisters, the balcony of the chapel, the maternity rooms, and the nurseries. The nursery is fitted with white basket beds. A feature of this department is an isolation parlor, to which a baby who is ill may be removed away from the other babies. The large bath room of this department is fitted with tubs especially for infants.

On the fifth floor are located the operating rooms and the laboratories. Adjacent to the operating rooms is the sterilizing department equipped with electrically operated sterilizing machines. There are also experimental rooms for individual study and research work for any physician. The fifth floor has a direct elevator connection with a suite of emergency rooms on the first floor.

Every care and attention has been used to make St. Anthony's Hospital one of the finest in its territory.

"GREETINGS"

Happy New Year to the Catholic Hospital Association and HOSPITAL PROGRESS!

What the coming year may hold for us none can foresee but it is our sincerest wish that the Christ Child may bring the Association and HOSPITAL PROGRESS choicest blessings and a generous harvest of happiness and good fortune upon its noble career.

SISTERS OF ST. FRANCIS,
Creighton Memorial
St. Joseph's Hospital, Omaha.

Advertising for Hospital Funds

Herman A. Felder, Pathologist, Providence Hospital, Everett, Wash.

In an issue of an English journal devoted to health and hospital problems, and read widely by physicians, hospital workers, sanitarians and the laity, is found what to us in America is an unusual type of paid advertising. It is so out of the ordinary and its lesson so great that it is worth while to present it here. Of a dozen such advertisements by large and well-known hospitals the following are taken as examples:

American hospitals in need of funds might do well to follow the plan of these English hospitals, who seem to have no hesitancy in presenting their financial record and making public appeal for aid. And, again, hospitals here having financial difficulties should take hope. They are not alone. Evidently many of the great hospitals abroad, too, have difficulty in obtaining funds for maintenance.

One of the editors had occasion, some years ago, to note the critical distress of the London hospitals, quite in keeping with the advertising campaign here referred to. In addition. there were many posters and placards, both on stationary billboards and moving vehicles, such as the omnipresent London busses. Some of these slogans were quite impressive: "Do you wish your hospitals to starve? If not, feed them—they need money." As an encouragement to particular giving, the following is recalled:

"What I saved, I lost,
What I spent, I had,
What I gave, I have."

ST. MARY'S HOSPITAL
PADDINGTON, W. 2.

To carry on the Work efficiently on its present scale throughout the year costs about £70,000.

REGULAR SOURCES OF INCOME ARE EXPECTED TO YIELD £20,000.

To maintain the Hospital during the present year there is therefore needed a further sum of £50,000.

CONTRIBUTIONS may be sent to the Treasurer, or the Secretary at the Hospital, or to the London County Westminster and Parr's Bank, Paddington Branch.

W. PARKES, Secretary.

GUY'S HOSPITAL, London Bridge,
(Founded 1724.) **NEEDS HELP** **S.E. 1.**

Incorporated under an Act of Parliament

1921: Beds, 614; In-Patients, 9,261; Out-Patients, 116,801;
Out-Patient attendances, 510,528; Expenditure £169,028.
Over £100,000 per annum required from sources other than Endowments.

Treasurer—VISCOUNT GOSCHEN. Bankers—THE BANK OF ENGLAND.

CITY OF LONDON HOSPITAL
FOR CHEST DISEASES
(Victoria Park Hospital), E. 2.

EXPENDITURE
£29,000.
ASSURED INCOME
£1,000.

Legacies for endowment (Beds £1,000, or Cots £500) are most earnestly solicited; also donations for immediate needs.

GEORGE WATTS, *Secretry.*

Safety in Use and Storage of X-Ray Films

FIFTEEN thousand lives and five hundred million dollars lost in fires in a year! These figures are astounding." The words quoted above are from literature recently sent out by the Fire Equipment Manufacturers' Institute, Cleveland, Ohio, Indeed, they *are* astounding. They should be more than astounding; they should strike home to the conscience of every individual. especially those in authority in institutions where fires are likely to endanger lives of helpless people. The fire hazard of every device, of every process, and of every practice in a hospital should be known and proper provision made for protection.

The remarkable development of x-ray examinations in hospitals as well as in the laboratories of doctors and dentists, demands consideration of the fire risk of these x-ray films. The Fire Prevention Year Book for 1924

contained two articles on this subject and the 1925 edition also carries an illustrated article on "Storage and Use of Inflammable X-Ray Films," with an illustration of a safety filing cabinet. This picture we are reproducing with the permission of Messrs. Hough and Lawson, Baltimore, publishers of the Year Book. We also acknowledge our indebtedness to the same publication for much of the information contained in this article.

Nitro-Cellulose Films Dangerous

The ordinary nitro-cellulose films used during and since the war are highly inflammable. They are likely to be ignited merely by too close proximity to steam pipes. A comparatively small amount of heat is sufficient to decompose such films thus generating a highly explosive and inflammable mixture of gases. This mixture of gases contains sufficient oxygen to support combustion even when the films are insulated from the air of the room.

Acetate-Cellulose Films Safe

But there is now on the market a plentiful supply of comparatively safe films known as *acetate-cellulose* films. They are slow burning and when stored in proper metal containers or cabinets they are not much more dangerous than paper records. All city fire departments, insurance companies, and fire protective agencies recommend that acetate-cellulose films be used, to the exclusion of all others.

Storing Dangerous Films

Where the old dangerous sort of films are still in use or where records made on the old style of films are being kept in storage, fire prevention agencies insist on absolutely safe storage cabinets or rooms. Besides having the proper heat insulation for walls, ceilings, and floors, these rooms or cabinets must have a vent or flue leading to the outer air. The latter precaution is necessary to permit the escape of the explosive and inflammable gas generated in the burning of nitro-cellulose films or, what is the same thing in other words, the decomposition of these films due to spontaneous combustion or to a comparatively small amount of heat.

When a storage room is provided, the National Board of Fire Underwriters specify that walls or partitions, floors, and ceilings shall be of non-combustible material. Walls shall be continuous from floor to ceiling and shall be securely anchored. They specify material and construction equivalent to one of the following: (1) Reinforced concrete; (2) metal lath with solid cement plaster not less than 2½ inches thick; (3) three-quarters of an inch of cement or gypsum plaster on metal lath on each side of studs; (4) brick; (5) tile; (6) hollow concrete blocks. The three last mentioned are to be plastered on each side to a thickness of ¼ inch.

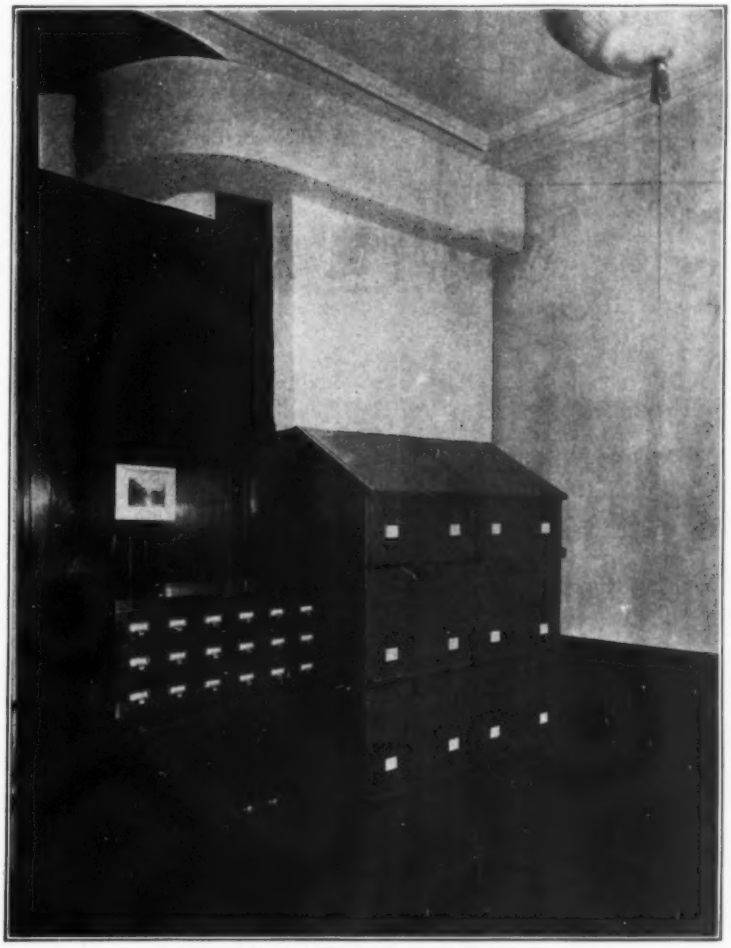
Openings from the storage room to other parts of the buildings shall be protected by a fire door conforming as to construction and installation to Class B of the Regulations for Protection of Openings in Walls and Partitions Against Fire. No skylights shall be permitted.

Slatted shelves for storage shall be of incombustible or at least of slow burning material, and divided vertically at intervals of not more than 10 feet. Aisle space shall be 3 feet wide. Height of racks shall be not over 8 feet and films shall not be stored higher than 2 feet below sprinkler deflectors. Proper automatic sprinklers shall be provided.

An adequate vent to the outer air must be provided containing half a square inch for each cubic foot of room space. Heating should be preferably by hot water; where steam is used, only low pressure steam shall be permitted. Radiators should be on the ceiling or properly screened and all pipe lines should be screened.

Metal Cabinets for Small Quantities of Films

Where the quantity of film storage is not large, a vented metal cabinet such as shown in the accompanying illustration may be used. The National Board of Fire Underwriters make the following specifications for such cabinets: (a) No cabinet shall exceed 30 cubic feet capacity. (b) They shall be of approved. insulated construction. (c) Cabinets having a capacity in excess of 200 pounds of film shall be divided into at least two distinct compartments, each compartment provided with an independent door and vent. The separating partitions should be practically air tight and be of substantial construction equivalent to the sides. (d) Cabinets holding over 100 pounds of film shall be equipped with at least one automatic sprinkler in each compartment unless each compartment holds less than 30 pounds of film, and fire cannot extend from one compartment to another. (e) Each compartment shall be provided with a vent to the outside air having a cross section area of at least one square inch per cubic foot of capacity of the cabinet.



FIREPROOF CABINET FOR FILING FILMS.

Both exposed and unexposed films should be stored in the sort of rooms or cabinets described. The usual and convenient custom of filing films in separate manilla envelopes is to be highly recommended as lessening the fire hazard.

GOLDEN JUBILEE OF FRANCISCAN SISTERS

Fifty years ago six Hospital Sisters of the Order of St. Francis came to the United States from Germany and began ministering to the sick at Springfield, Ill. This was the beginning of St. John's Hospital, the headquarters of the Sisters who control thirteen hospitals in Illinois and neighboring states. There are about 700 Sisters of the order now in the United States.

On Nov. 12 and 13, the Sisters celebrated their Golden Jubilee at St. John's Hospital, Springfield, and at all their institutions. Thursday morning, November 12, the jubilee celebration opened with pontifical high Mass followed by a dinner for the clergy of the diocese. At 6 p. m. the 150 attending physicians of the hospital and the members of the clergy were tendered a very enjoyable dinner and program. At 8 p. m. the alumnae and students of the nursing school were entertained with a special program in the library of the nurses home.

On Friday the Sisters held a thirteen hour devotion and on Saturday attended a solemn requiem Mass for deceased members of the order. The jubilee was observed as a special occasion of thanksgiving for the Sisters.

ARMISTICE DAY AT ST. VINCENT'S INFIRMARY, LITTLE ROCK, ARK.

St. Vincent's Military Unit, known as Evacuation Hospital Number 24, was organized in 1923 at the solicitation of Surgeon General Ireland, of the War Department. Dr. Frank Vinsonhaler, the commanding officer, has been untiring in his efforts to make this unit a credit to the profession and to the institution which fosters it. In case of national emergency these evacuation hospitals are located just back of the line of battle. Ready-to-function hospitals, such as these are, have a decided advantage over others in that the personnel is made up of those who have already become acquainted with each other and are familiar with one another's technique.

With a view to strengthening these bonds of acquaintance, the Sisters entertained St. Vincent's Unit at a banquet on Armistice Day, this year. The hall was beautifully decorated in the national colors and most of the guests appeared in uniform. There was a specially designed place card at each of the fifty-five plates, painted by one of St. Vincent's gifted pupil nurses. There were smiling Old Uncle Sams, and dainty Red Cross Nurses in their blue army capes with the famous red lining, flags, and emblems of various kinds. Patriotic Airs were played during the banquet.

Colonel Vinsonhaler, seated at the head of the table, strong, hearty, and kind, inspired the nurses with a feeling of confidence in his leadership, and this confidence was strengthened by the fact that at the other end of the table sat their own Father John Patrick Fisher, the unit's chaplain, who would watch over them in danger even as he watched over them in peace.

ARMISTICE DAY CELEBRATION, ST. VINCENT'S INFIRMARY, LITTLE ROCK, ARK.

Dr. Vinsonhaler called upon a number of the guests for personal reminiscences of the original Armistice Day and it was interesting to follow the accounts of that memorable morning so feelingly described by men and women who had witnessed it on the battlefield, in England, and across the sea in our own beloved America.

NEW YEAR GREETINGS TO HOSPITAL PROGRESS

Again the peals of gladsome bells are chiming a Bright New Year, may they joyously reecho in the hearts of all readers of HOSPITAL PROGRESS. As the mellow tones of those that proclaimed the year now dying linger in the memory, may they treasure up the countless inspirations of loyalty to high ideals and Christian charity given by HOSPITAL PROGRESS. May the blessings of a Happy and Prosperous New Year crown the untiring efforts of Rev. Father Moulinier, Rev. Father Garesche' and their coworkers with continued success in the many phases of hospital activity.

SISTER M. BERNARDA, *Prov. Sup.*

St. Elizabeth Hospital, LaFayette, Indiana, Dec. 14, 1925.

CLINICAL PATHOLOGY
Review and Digest of International Medical Literature Concerning Laboratory Technique, Laboratory Diagnostic Methods, Laboratory Apparatus etc. Edited and directed by
EDWARD L. MILOSLAVICH, M. D.
Professor of Pathology and Bacteriology, Marquette University, Milwaukee, Wis.

Serologic Flocculation Reactions in Syphillis

(Continued)

John Grill, M.D.

In 1917 Meinicke published his first original method of flocculation reaction for the sero-diagnosis of syphilis based upon a long series of research.

This so-called "water method" was carried out as follows: 0.2 c.c. of serum, inactivated for one hour, is brought in contact with 1.5 c.c. of an alcoholic extract dilution, one to twelve. The serum antigen mixture is incubated for one hour, after which 2.5 c.c. of distilled water is added. Then the tubes are again incubated for sixteen hours and on the following morning the results can be read. In this method negative sera show a precipitation, while positive sera appear cloudy, but without any flocculi.

Soon after the publication of this "water method" Meinicke introduced a second modification of his flocculation reactions known as "the salt solution method". In this test 0.2 c.c. of serum, inactivated for fifteen minutes, is mixed with 0.8 c.c. of a dilution, of one to eight antigen. The mixture is incubated over night at 37 C. After this first incubation period all sera, the positive as well as the negative, show flocculi. Then to each tube one c.c. of a titrated sodium chloride solution is added and the test tubes are incubated again for one hour, after which time the flocculi of the negative sera have become dissolved, while the flocculi of the positive sera are unaltered, resisting the influence of the sodium chloride solution.

Meinicke's Third Modification

Both methods have today more theoretical than practical value. They are somewhat elaborate and of less specificity but lead gradually to a more perfect reaction. In 1919 Meinicke evolved his third and very successful modification. This improved method, very simple in its technique, and closely corresponding with the results of the complement fixation test today, serves as a valuable aid in the laboratory diagnosis of syphilis. Therefore, in the following discussion only the technique of the third modification of Meinicke's reaction will be given in detail.

Preparation of Antigen

Horse hearts are dissected free of fat, large blood vessels and connective tissue and passed through a meat chopper three or four times. The minced heart tissue is spread on glass plates in a thin layer dried at 50 or 55 C., the cakes of the dried material are broken up and ground in a mortar to a fine powder. To 20 grams of the dried powder 180 c.c. of ether is added and the mixture is shaken for one hour. After filtering the ether, the residue is dried at 37 C., placed in a bottle and extracted a second time with 180 c.c. of 95% alcohol for one week in an incubator, shaking the mixture several times daily. The alcoholic extract is finally filtered through fat-free filter paper and constitutes the *raw extract*. Before using, each newly prepared antigen is titrated with 95% alcohol and distilled water to determine the quantity of alcohol to be added to the raw extract, to obtain the *stock antigen*, from which the antigen emulsion for the test proper is prepared.

For the *titration of the antigen* we set up six (6) test tubes in a rack, filling them with a decreasing amount of raw extract and increasing amount of alcohol. The first test tube receives 0.4 c.c. of raw extract and 0.1 c.c. of 95% alcohol. Test tube 2: 0.35 c.c. extract plus 0.15 c.c. of alcohol. Test tube 3: 0.3 c.c. of extract and 0.2 c.c. of alcohol. Test tube 4: 0.25 c.c. of extract and 0.25 c.c. of alcohol. Test tube 5: 0.2 c.c. of extract plus 0.3 c.c. of alcohol. The last test tube 0.1 c.c. of extract and 0.4 c.c. of alcohol.

To each test tube 0.25 c.c. of distilled water is added, the contents of the tubes are well mixed and allowed to stand at room temperature for one hour. After this period 3.5 c.c. of distilled water is quickly added to each of the tubes. The right proportion between alcohol and extract is detected readily in the tube in which immediately after the first addition of distilled water a distinct opalescence appears, which during the one-hour period becomes milky translucent and clears up somewhat after the second addition of distilled water. If the concentration is too strong the mixture becomes, after the first addition of water, distinctly cloudy, forming sometimes a delicate precipitation. Too weak a concentration is characterized by the clearing up entirely after the second addition of water. If the proper concentration is determined by the simple titration, the raw extract is diluted in alcohol as follows: we assume for instance that the right relation between the extract and alcohol was present in the test tube containing 0.2 c.c. of raw extract and 0.3 c.c. of alcohol. In that case we mix twenty (20) parts of raw extract with thirty (30) parts of 95% alcohol. This forms the *standardized stock extract*, from which the antigen emulsion is prepared for the test. The stock extract can be prepared in larger quantities. It is stable for a long time if kept in brown air-tight bottles at room temperature (not in a refrigerator).

Dilution of the Antigen (Antigen Emulsion)

As in every flocculation test, also in Meinicke's third modification, a certain method of diluting the antigen has to be observed. One part of standardized stock antigen is measured into a flask and one-half of this quantity of distilled water is added, the contents are well shaken and permitted to stand at room temperature for one hour. After this period a 2% solution of soduim chloride is added, seven (7) times the amount of the stock antigen used. In that way one obtains a milky opalescent solution, the *antigen emulsion;* for carrying out the test 0.8 c.c. of antigen emulsion and 0.2 c.c. of patient's serum are mixed.

Patient's Serum

The sera under examination should be clear and free of cellular elements; hemolytic sera sometimes give unspecific results. The sera should be inactivated for 15 minutes at 55 C. according to the Meinicke direction for the test.

Technique of the Test

No. 1. Preparation of the antigen emulsion: one c.c. of stock antigen is measured into a small Erlenmeyer flask and one-half c.c. of distilled water is added. Shake the contents and allow to stand at room temperature for one hour. Then add 7 c.c. of a 2% saline solution. An antigen emulsion prepared in the described proportions will be sufficient for ten tests.

No. 2. Set up in a rack a row of small test tubes (75 mm. long and 10 mm. in diameter) and measure into each tube 0.2 c.c. of the inactivated patient's serum.

No. 3. To each tube containing the patient's serum 0.8 c.c. of antigen emulsion is added. The test tubes are well shaken and placed in an incubator for 18 to 24 hours, after which period the results may be read.

As controls, known positive and negative sera, are used which are tested in the same manner as the unknown sera.

The reading and recording of the results are made as outlined in the general discussion of the flocculation tests. Strong positive reacting sera present a complete precipitation, the precipitated flocculi are suspended in a clear fluid; negative sera appear opalescent and translucent without any indication of precipitate formation.

Technique for Examination of Spinal Fluid

The third modification of Meinicke flocculation reaction can also be employed on spinal fluid. The procedure for this examination would be as follows:

No. 1. The antigen dilution is prepared according to the same method as for testing blood serum.

No. 2. For each spinal fluid to be examined two test tubes are set up. Test tube No. 1 receives 0.25 c.c. of spinal fluid, test tube No. 2, 0.5 c.c. of spinal fluid.

No. 3. To each test tube 0.4 c.c. of an antigen emulsion is added.

No. 4. Shake and incubate for 18 to 24 hours and then read the results.

(To be Continued)

One Aspect of Nursing Education

Edward F. Garesché, S. J.

Mr. Stephen Leacock, that amiable humorist who gave us a few years ago the narrative of his Discovery of England, says many true things in a pleasant way. In his chapter on "Oxford as I See It," he speaks feelingly about women's education. His contention is that education should be a preparation for life; that women's education should prepare for women's life, but that all of what we call modern education is built up from man's standpoint and not woman's. "The careers of men and women," says he, "who go to college together are necessarily different, and the preparation is all aimed at the man's career." The career of most women, he timidly points out, is matrimony. Then after humorously indicating how very poor a preparation for matrimony from woman's standpoint, are the ordinary branches of the college curriculum, he bursts forth as follows: "Why not give her an education that will have a meaning and a harmony with the real life that she is to follow?

"For example, suppose that during her four years every girl lucky enough to get a higher education spend at least six months of it in the training and discipline of a hospital as a nurse. There is more education and character-making in that than in a whole bucketful of algebra.

"But no, the woman insists on snatching her share of an education designed by Erasmus, or William of Wykeham, or William of Occam for the creation of scholars and lawyers; and when later on in her home, there is a sudden sickness or accident, and the life or death of those nearest to her hangs upon skill and knowledge and a trained fortitude in an emergency, she must needs send in all haste for a hired woman to fill a place that she herself has never learned to occupy."

Though we protest against the phrase "hired woman" as very inappropriate to describe a graduate nurse, still it is quite true that the training given a nurse is an excellent preparation for after life, whether it be in matrimony or single blessedness. But, this is true, only when the training given is all that it should be. In fact, the remarks we have quoted serve to emphasize the responsibility which rests on those in charge of schools of nursing, of training their pupils for life.

The training school has the same responsibilities that any other school must bear. It is educating not only nurses but women, who will have to live their lives as well as practice their profession. Indeed, they can not be good nurses, without being sterling women. All the science and skill they acquire may be vain or dangerous, unless at the same time, their characters are holy, strong and pure.

In education, the first and sublimest task is to build character, and the building of character is chiefly accomplished through religious training and instruction, and through moral discipline. Therefore, the religious teaching of the training school, and its moral discipline, are the two most important elements in nursing education as a preparation for life. It will be profitable for our superintendents of training schools and for others who are responsible for their efficiency to consider gravely whether the training given in their schools is truly effective as a preparation for after life. Is the religious element of the training strong, vital, constant, and of paramount importance in the school? If it is not, if the superintendent of the school has any serious reason to regret deficiencies in religious training, then that school is not doing its duty in preparing the students for after life.

Now, as a matter of fact, the right teaching of religion in the training school is one of the most difficult of its problems. Surely it follows that this subject should receive great consideration. Indeed, if we are to believe the experience of graduate nurses, many a girl leaves the training school nowadays with less religious fervor and with not much better knowledge of her faith than when she entered it.

Religious instruction, and even that copious supply of books which would give the nurses opportunities for private study of religion, do not seem to receive a proportionate degree of attention in some of our training schools. If the nurse leaves the training school ignorant of these things and uninspired to improve her knowledge of them, what prospect is there that in the distraction and preoccupation of a nurse's life, she will ever perfect her knowledge?

The moral discipline of the nurses, if it is to be a preparation for after life, should also receive earnest thought at the hands of the hospital authorities. By moral discipline we mean the training of the will, the forming of habits of right choice, the cultivation of a sense of personal responsibility and of the determination to do what is right, whether any one urges or oversees or not.

In itself a training school is likely, unless special measures are taken, to lack this element of moral training for after life. We use the word "moral" here not as limited only to what is good and pure, but as embracing the whole moral character of the student, her conscientious discharge of duty, her ability to choose what is right for herself in difficult circumstances, and her justice and fairness, initiative and energy in leading her own free life, governed by her own virtuous will.

The girl who enters a training school has a right to expect that she will be given religious instruction and moral training of the kind to fit her for the life of

a nurse. Still more, has she a right to expect such a training as will prepare her for after life in general, because the nurse requires even more religious and moral training than the ordinary person in the world. If she receives less than is necessary for this training she surely, then, has a right to complain.

Unfortunately, the curriculum of the training school is so crowded, there is a tendency to make the religious instruction of the pupil secondary to many other things. In point of fact, it is second to nothing, either in dignity or importance. Even from the viewpoint of the after-efficiency and happiness of the nurse, nothing is more important than religion. When we remember that many pupils come to the training school notably deficient in religious training, for one reason or another, the absolute necessity of emphasizing this element becomes more manifest. Of course, those in charge of the school are not responsible if their students come to them with a lack of religious instruction, but they are responsible if they go forth again still deficient.

We know very well the serious difficulty that stands in the way of systematic and thorough instruction in religion. But the thing is so important that no difficulty must be allowed to stand in the way for long. If, tomorrow, a new subject were introduced into all the training schools of the land of any sort of equal importance to the study of religion, though it required two hours a week for its mastery, the time would somehow be found. New adjustments of schedules would be made, or less important subjects would be curtailed or dropped, until the necessary time was provided.

Now, if this can be done in the secular branches, it is also possible for religious instruction. If it is possible, it is imperative, for nothing can take the place of, or compensate for, a due knowledge of religion, both for the training of the nurse and the training of the human being for after life.

When we come to the subject of moral discipline, the development of a personal sense of duty and fidelity, both in religious practice and in professional work, we should carefully scrutinize the accomplishments of our training schools from this standpoint also, for upon the development of this personal fidelity to principle, depends not only the professional success of the nurse but her success as a human being, the goodness of her life and the salvation of her soul. Whatever may be her after-career, whether she continues nursing, or marries, or goes into some other way of life, the discipline of her will to self-sacrifice, duty, honor, and a sense of personal responsibility are all important for her own happiness and of those with whom she comes in contact and those whom she influences.

Now, in itself, the atmosphere of a training school is not particularly conducive to the development of these qualities. Exterior discipline, if not sustained and impelled by interior motives of fidelity, trains only to exterior observance. If the nurses follow rules, do what is told them, in a passive way, without the exercise of their personal choice and chiefly out of fear of the immediate consequences, if they commit any fault, then this begets in them rather the habit of submissiveness than the attitude of personal fidelity to principle. It is one of the greatest and most constant problems of all education to train the child to initiative and self-reliance, while at the same time making him conform to exterior discipline. Therefore, the training schools, especially, those responsible for the student nurses, ought to make it a point to try to give them definite exercises in individual fidelity to principle, in self-dependent and habitual piety, truth, dependableness and high principles in action.

This training may be said to be more necessary, if anything, for the nurse than for other students because her professional career will call on her, to an unusual degree, for personal determination and fidelity to principle. While in the training school, it is comparatively easy for her to conform to the good example of those around her and the general good atmosphere of the school. But, as soon as she graduates, she is thrown on her own resources, and sometimes is entirely separated from any exterior influence which might move her to piety. Her work is hard and exacting. It sometimes brings her face to face suddenly with ethical problems which tax her intelligence and resolution to solve them properly. The nature of her work keeps her away from associations with others who might help her. The ensuing weariness sometimes discourages her, and the interference with her religious duties often tends to make her careless.

Against all these things she should be deliberately fortified during the time of her training, and those responsible for her nursing education should make it a matter of conscience to do all they reasonably can to prepare, instruct, and strengthen her for after life. There are, as we have several times pointed out, two ways of dealing with students. One is to govern them from without inwards; the other to rule them from within outwards.

By these phrases, we mean to contrast two methods of training students. The one, proceeding from without inwards, applies to the student the methods of exterior persuasion. It induces her to do this and that because of the wish of the teacher, reinforced by punishments or rewards, not because of the intrinsic excellence of the thing itself. "Do this because I want you to do it, because I will punish you if you do not do it." This is the manner of motive which is used in ruling the student from without inwards. Her actions then proceed rather from the dominance of another's will than from her own interior and spontaneous choice. She is thus trained not to personal fidelity to principle, nor to independent initiative and perseverance, so much as to submissiveness and docility, the doing of another's will, rather than her own.

The second way of training, which is infinitely better as a preparation for life, and much more reasonable in itself, consists in influencing the student from within outwards; that is to say, in giving adequate motives and reasons for right actions and accustoming the pupil to choose correctly, and to act consistently because of the worthiness and goodness of such a course. In this way, we shall be dealing with the pupil, so as to develop the personal choice and consistent fidelity so much needed in after days when there will be no one near to urge and command. "Do this because it is right, it is worthy of you, it is good in itself, and pleasing to God and because the opposite way of conduct is wrong, unworthy, ignoble." This is the sort of motive which we will give the pupils in the second way of influencing them. Obviously, it is infinitely more desirable as a training for after life, to use this second method of training.

Yet, it must be confessed, that the first method is much easier. It is so much quicker and more direct, merely to impose our will on the pupil, and to hold her to the observance of rules and performance of work because we order it. If we have to stop and explain, to give motives, and to cultivate a personal sense of responsibility, this involves explanations, tactful exhortations, a whole series of training which the other method does not require.

Yet, it is surely far more reasonable and kind, far more in accord with the principles of justice, to train the pupil in this second way which is so practical a preparation for after life. Considering the dangers to which nurses are exposed, the difficulties they meet, the pres-

sure brought upon them at times to discourage them from religious exercises, we ought to do all we can to fortify and equip them by thorough training.

Time and again we have called attention to the opportunities offered in this connection by a rightly organized and thoroughly understood Sodality of the Blessed Virgin. The regular exercises of school are of necessity enjoined by rule and must be insisted on. But in the Sodality the nurse is given an opportunity of exercising her personal initiative and of practicing self-sacrifice, zeal, voluntary piety, and others of the qualities which she will find necessary in after days. The Sodality may be made an exercise ground, a training school for after life, and the nurses may there be taught and tested in the qualities we have been insisting on as a preparation for the days which follow their school training.

Life afterward will bring to each pupil nurse a different experience. To one it will offer perhaps the opportunities of a religious life. The right sort of training during the student period is a powerful help toward the cultivation of vocations. Why is it that our Sisters observe so many among their pupil nurses who seem to have all the requisites for a religious vocation but who never summon up courage to take the step? One great reason is that they lack the personal resolution, the spirit of self-sacrifice which could be developed in them through the right sort of training.

Another pupil may continue for years in the practice of nursing. Why is it that in too many instances the graduates of our Catholic training schools are found lacking in piety or in some cases fall away altogether from their religious practice? May it not be because, in the routine of the training school, they were only made to conform exteriorly to discipline, they went passively to Sodality meetings and devotions? They were never sufficiently trained in that inward, personal, spontaneous, and willing fidelity to duty which alone can keep them steadfast in the days that follow graduation.

Finally, there are those, and they form perhaps the majority, who leave off nursing after a while to enter the married state. It is a matter of remark that nurses after they graduate sometimes show little prudence in their marriages. May not one reason be that, while at training school, they did not receive quite all the instruction and training along practical religious lines, which they needed for after life?

It startles those in charge of training schools at times to find nurses who, during their training seemed pious and dutiful, suddenly violate the laws of the Church, concerning marriage. It is either because they have never understood and realized the importance of the laws of nature and of the Church in these grave matters, or because their personal virtue, their fidelity to principle, has not been exercised to keep them strong in the hour of temptation. This may indeed be the fault of their own free will, for which no one is responsible but themselves. But may it not also be, in some instances, the result of a lack of training during their time of study for the rubs and trials of after life?

THE HOSPITAL PRAYER

As was announced at the convention, the Catholic Hospital Association enjoys the privilege of a special Brief from the Holy Father, conferring on it the privilege of an indulgence for every recitation of the Hospital Prayer by its members. Now that the new year is beginning it will be well to print this prayer again and to recall to the attention of hospital workers that it can be had printed on a very attractive little card with the prayer on one side and on the other a sacred picture very prettily printed. These cards may be had 2 for 5c, 25 for 40c, 50 for 75c, 100 for $1.00, and 1,000 for $9.00. Send your orders to the Catholic Hospital Association, 124 13th Street, Milwaukee, Wisconsin. These cards would make a very pretty New Year's gift for the patients in the hospital.

United Hospital Fund. Eighteen million dollars was spent by 57 member hospitals of the United Hospital Fund of New York in caring for approximately a million sick persons last year, according to Minott A. Osborn, general director of the fund. The organization is endeavoring to raise a million dollars to be distributed among member hospitals in proportion to the amount of free treatment which each hospital gives to persons unable to pay for it during the year.

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